

LEARNER ENGAGEMENT STRATEGIES IN ONLINE CLASS ENVIRONMENT

A Dissertation

by

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ABSTRACT

This dissertation explores the area of student engagement. Precisely, the dissertation attempts to find out the importance, roles, significance and factors involved in online student engagement and their consequences in achieving a positive learning environment.

The first stream of inquiry investigated the perceived links between students' perceived learning, motivation and attitude towards learning, that can be manipulated through careful usage of appropriate instructional strategies. Manuscript one is a literature review, which highlights student engagement strategies in online classes. The strategies revolved around two important domains: Instructor presence and teaching immediacy. The purpose of this was to identify pertinent studies on the important issue of student engagement strategies in online courses and student engagement strategies that work.

The second is the extension of the first's findings. Instructor presence and teaching immediacy are two important constructs highlighted in the first. The role and significance of teaching presence and teaching immediacy are presented in the second, which is a literature review to find out the importance of these two constructs in achieving student engagement. The successfully identified three areas of importance in online learning environment are learners' attitude, motivation and learning.

The third establishes solid theoretical foundation by asserting the importance of understanding the big picture of learning and teaching through relevant theories. The assumptions for the fourth empirical study are delved from this.

The fourth is an empirical study that looks at the effect of teaching presence and teaching immediacy on students' motivation, affective learning, and cognitive learning. The fourth study attempts to find out the influence of teaching presence and teaching immediacy on students' motivation, affective learning and cognitive learning. Teaching presence is established to have positive influence on students' motivation, affective learning and cognitive learning.

DEDICATION

To my family, advisors, friends, colleagues and mentors who have greatly influenced, supported, and guided me throughout my lifetime and in this scholarly endeavor.

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CHAPTER I

INTRODUCTION

This dissertation explores the area of student engagement. Precisely, the dissertation attempts to find out the importance, roles, significance and factors involved and their consequences in achieving positive learning environment for all students. The first stream of inquiry investigated the perceived links between students' perceived learning, motivation and attitude towards learning. Students' attitude towards learning, motivation and students' learning perception can be manipulated through careful usage of appropriate strategies. Manuscript one is a literature review that highlights student engagement strategies in online classes. The strategies revolved around two important domains: Instructor presence and teaching immediacy. The purpose of this was to identify pertinent studies on the important issue of student engagement strategies in online courses and to student engagement strategies that work. The second is the extension of the first's findings. Instructor presence and teaching immediacy are two important constructs highlighted in the first. The role and significance of teaching presence and teaching immediacy are presented in the second, which is a literature review to find out the importance of these two constructs in achieving student engagement. The successfully identified three student engagement strategies in online learning environments: learners' attitude, motivation and cognitive learning. The third establishes solid theoretical foundation by asserting the importance of understanding the big picture of learning and teaching in online environments through relevant theories.

The forth is an empirical study that looks at the effect of teaching presence and teaching immediacy on students' motivation, affective learning, and cognitive learning.

Impetus for Selecting the Topic: Online Class Engagement

My role as technology teaching assistant in the department of Educational Administration and Human Resource Development provided me with the opportunity to design and develop many online classes and therefore, presented a firsthand experience with the students' participation, issues and strengths in online classes. My role as technology teaching assistant (TA) made me interested to explore the area of online engagement and look for strategies to create positive learning experiences for the virtual learners.

I found relevant literature (Aslanian & Clinefelter, 2012; Mgutshini, 2012; Yang, Yeh & Wong, 2010) addressing the need to conduct studies related to virtual learning environment in order to create a platform that not only presents information but also creates engaging classes, where learners get a sense of learning community to promote constructivist, social and even transformational learning. Aslanian and Clinefelter (2012) proposed that by the year 2015, most of the college students would take at least one class online. The prediction turned out to be true. Online student enrolment in the United States of America has increased drastically. As noted, "70% of institutions of higher education report that online education is critical to their long-term strategy" (Glazier, 2016, p. 2).

Online classes are consistently imparting and improving knowledge of learners separated by geographical distances. The limitless expansion beyond geographical

boundaries attract large pool of talents without incurring travel and physical expenses related to traditional face-to-face classes (Li & Irby, 2008). According to Palloff and Pratt (2007) the growth in Internet use population is directly related to the greater demand of online classes. The increasing demand of technology savvy diverse learners separated by geographic distances is noticed by nonprofit and for profit organizations. As a result institutions like National University, which is the second largest nonprofit institute in California, is offering 60% of their courses online with most of the traditional classes having online components (Silverstone & Keeler, 2013). As Mgutshini (2012) summarized the present scenario related to online class environment.

Developments in computing, particularly with respect to the use of the Internet, have fueled an unprecedented growth in the use of technology-based environments within education. Notably, both distance-learning institutions, as well as conventional academic institutions have integrated a range of electronic learning environments, such as virtual discussion rooms, podcasts, virtual simulations and twitter boards into their curricula. A number of reasons for these developments have been offered. Web-based strategies are seen as representing a revolutionary progression in learning through the flexibility of occurring anywhere, at any time and at a lesser cost than face to- face alternatives (p. 1).

The challenges identified in online environment include isolation of learners, and physical separation. As a result, interpersonal relation among learners and with instructor is affected (Aaragon, 2003). Learners' isolation is often suggested to be solved with

forming learning community. Teaching presence and/or social presence play significant role in this aspect.

Different studies highlighted the importance of forming community among students. Researchers suggested that sense of community is beneficial for the students' emotional and cognitive development (Aaragon, 2003; Grandzol & Grandzol, 2006). Essential to the online education experience is what various researchers have termed "community of learners," "knowledge-building communities," "virtual learning communities," or "communities of inquiry." This concept has encouraged course design such that students can contribute to the evolving knowledge base of the group, while developing underlying social networks within their course (Grandzol & Grandzol, 2006)

Social presence is not the only component necessary to be successful online classes. Gunawardena and Zittle (1997) suggested that intimacy and immediacy are two concepts associated with social presence in which intimacy is dependent on nonverbal factors, including physical distance, eye contact, and smiling. Immediacy is a "measure of the psychological distance that a communicator puts between himself or herself and the object of his/her communication" (Gunawardena & Zittle, 1997, p. 9).

Because of the rapidly changing nature of the technological innovation impacting the design and delivery of the course content, the face of education is changing (Calis, 2008). The recent technological innovations are creating scope to provide interactive and flexible online learning environment. However, shift from interactive and familiar environment of traditional class setting to the virtual world seems challenging to both faculties and the students. The challenges identified include the following: very limited

supervision from the instructor (Mgutshini, 2012), inefficient use of technology (Bonk & Graham 2006), and lack of communication (Yang, Yeh & Wong, 2010).

As researcher and as future scholar, I focused on the challenges and drawbacks of online learning environment. The search was focused on finding solution, means, ways and strategies to engage online learners. This acted as impetus for the first study that I performed. The findings of the first study highlighted the importance of the factors: teaching presence and teaching immediacy. Hence, the findings acted as motivating force for the second study that delve in the role of teaching presence and teaching immediacy in students', motivation and learning. The theoretical foundation helped boosting confidence to know that the study constructs are supported by established literature. The findings propelled for an empirical study considering the effect of teaching presence and teaching immediacy on students' motivation, affective learning and cognitive learning.

Collaboration in Conducting Research

Two completed papers are in collaboration with my Advisor Dr. Fredrick M. Nafukho. Dr. Nafukho's expertise in online field of education and in conducting research based studies enriched and guided the whole research process. The literature search process was conducted following systematic literature review approach. The empirical study was conducted following the IRB approval and based on Texas A&M University research guidelines

As required by the Texas A&M (2015) accepted procedure, I performed the lead researcher and authorship role. In this role, I was involved in primary design,

development, and collection of primary and secondary data, analysis of data, primary writing and dissemination of findings. The whole process was conducted under the guidance of Dr. Nafukho my dissertation chair. I feel privileged to have been to participate and publish important works in refereed journal articles as a student and plan to publish the fourth manuscript from this dissertation.

Overview of Dissertation

This Dissertation is comprised of five chapters and two appendices. The chapter organization, manuscript arrangement, and citation are in compliance with Publication Manual of the American Psychological Association (APA), sixth edition. It is a journal-style dissertation with three manuscripts already published and a forth one to be published after the dissertation defense. .

The introduction section, which is the chapter one of this dissertation, provides overview of the five remaining chapters. It also highlights the justification and rationale of choosing the topic of online class engagement strategies. Chapters 2, 3 and 4 present the completed manuscripts. Chapter 5 presents the idea, problem statement, hypotheses, methodology, results, significance of the empirical study. Chapter 5 is the summary and conclusion section of the dissertation.

CHAPTER II

STRENGTHENING STUDENT ENGAGEMENT: WHAT DO STUDENTS WANT IN ONLINE COURSES?¹

Synopsis

The popularity of online classes is increasing steadily. Globalization, business expansion, and profit generation are some causes for online classes to become indispensable in both professional and educational settings. The alternative mode of delivering content is becoming a platform, where learners can have engaging learning experiences. The chapter identifies pertinent studies on the important issue of student engagement strategies in online courses and establishes from empirical studies student engagement strategies that work. The results of this chapter revealed several factors can create engaging learning experiences for the online learners. The primary factors included: ‘Creating and maintaining positive learning environment’; ‘Building Learning Community’, ‘Giving Consistent Feedback in Timely Manner’; and ‘Using the Right Technology to Deliver the Right Content’. The findings of this chapter can help identify areas where the instructors and designers of online classes need to focus. The student engagement strategies for online courses should assist both experienced and beginner online instructors in the design and successful delivery of online courses. Students taking online courses should find the results of this study invaluable.

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Introduction

Innovations in technology and development of learning management systems (LMS) aimed at providing a supportive learning environment to students enrolled in online courses is a positive and encouraging development. The easier, simpler, and supportive alternatives to complete a course has transformed into the interesting, engaging and essential platform to excel in academic and professional curriculum (Rennie & Morrison, 2012). Online learning is becoming the focus in both personal and professional spheres. Murray et. al., (2012) proposed that by 2014 most of the students will take some classes online. Instructors and facilitators of learning realize the importance of designing and delivering engaging online courses and therefore, strive to gain learners' attention and interests in online class settings. Several researchers have addressed the issue of student engagement by considering the viewpoints of instructors and students (Berge, 1995; Han, 2012; Harasim, Hiltz, Teles & Turoff, 1995). The professional and educational communities of learning in this globalized and interconnected world realize the importance of delivering training and learning programs utilizing virtual learning environments. As noted, "Online learning has been promoted as being more cost effective and convenient than traditional educational environments as well as providing opportunities for more learners to continue their educations" (Han, 2012, p. 69). Thus, issues of access, flexibility and cost effectiveness have been advanced to justify the growing investment in online learning programs (Nafukho, Thompson & Brooks, 2004).

Existing literature on the topic of online learning identifies numerous benefits of delivering training and education programs online. For instance, students who are away from campus can access class content any time and from any place. In addition, the virtual environment for learning enables students from international countries to take courses of their choice (Baker et al., 2009). Robinson and Hullinger (2008) observed that students' computer skills improve when they take computer-mediated classes. Nevertheless, students in web based classes do not need to be technology savvy, rather their basic knowledge regarding e-mailing, exploring software, chatting, taking part in discussion posts, and uploading assignments get improved significantly. It has been the topic of discussion that students taking computer-mediated classes show a higher order of cognitive development than those enrolled in face to face classes. Students in online classes have also been reported to get more time to think critically and hence manifest proficiency in judging, analyzing, and applying knowledge into practical scenarios (Chen, 2007). Duderstadt, Atkins, and Houweling (2002), noted, "when implemented through active, inquiry based learning pedagogies, online learning can stimulate students to use higher order skills such as problem solving, collaboration, and stimulation" (p. 75).

In spite of the above mentioned tangible and intangible benefits accruing to students enrolled in online courses, online class environment presents the challenge of managing complex class environment as compared to a traditional face-to-face setting. One of the disadvantages of online environment as pointed out in the literature is the reduced interaction between and among the students and course facilitators (Bullen,

1998). Chen et al. 2010) observed, "... no communication technology can replace the physical presence and the serendipitous moments of learning such as the spontaneous discussion or the overheard remarks during class break that so often occurred in a face-to-face environment" (p. 1223).

Problem Statement and Purpose

Although delivering learning content online is associated with numerous advantages, online classes often face skepticism. The issue of how to effectively engage students in online courses raises more questions than answers. Online classes need efficient strategies to provide effective learning experiences to the learners (Chen, et. al., 2010). The primary purpose of this study was to identify pertinent studies on the important issue of student engagement strategies in online courses and to establish from empirical studies student engagement strategies that work. First, the importance of incorporating online class engagement strategies is presented. This is followed by a discussion on existing recent research identifying effective student engagement strategies in online courses. In addition, the chapter examines the engagement strategies that worked well and learning activities that led to enhanced online learners' experiences.

Research Questions

To achieve the purpose of the study, the following research questions guided the study:

1. What strategies have been employed by instructors to motivate and engage students in online class environment?

2. What are the instructors' and students' perception regarding online student engagement strategies?
3. What teaching and learning activities are utilized in order to engage students in online learning environments?

To answer the three research questions, a thorough and systematic search of relevant literature was conducted.

Theoretical Framework

In order to understand the students' engagement strategies that work, the study was guided by the theory of motivation and learning and the behaviorist, cognitivist and constructivist schools of thought. Regarding the theory of motivation and learner engagement in online courses, Chen, Zap & Dede (2012) described Expectancy-Value Models of Motivation in the context of a virtual class on Mathematics. The Expectancy-Value Models of Motivation helps us understand what students value and what they believe in the educational context. Chen et al., (2010) highlighted three expectance constructs: 'causal attributions, implicit theories of ability and self-efficacy' (p. 4). If students can relate their effort with their success, their self-esteem is positively affected. Chen et al. however, did not propose any positive relation between external help (e.g. teacher's help) and students' self-esteem. Kreps (1997) advocated the importance of external motivation. Positive feedback, recognition in the student discussion forums can help students achieve external motivation. Rewards, recognitions and positive feedback often produce extrinsic motivation. "Extrinsic motivation pertains to behaviors that are engaged in response to something apart from its own sake, such as reward or recognition or the dictates of other people" (Lee, Cheung, & Chen, 2005, p. 1097).

The literature suggests that motivation plays crucial role in online class environment (Beffa-Negrini, Cohen & Miller, 2002; Palloff & Pratt, 2003). The motivated students tend to have engaging learning experiences as they spend time viewing and reviewing the course content. Miltiadou & Savenye (2003) poised that in order to understand whether a student will succeed or not in online class environment, it is very significant to pay attention to the students' motivation factors. The behaviorist, cognitivist and constructivist learning theories shed light on how internal intelligence, inspirations and extrinsic factors motivate learners.

Ally (2004) advocated that behaviorist learning theory presumes that the human mind is like an empty box (Tabular rasa) and does not consider the effects of previous experiences and how these experiences influence learning. Directing learners towards sequential learning process, revealing explicitly the positive learning outcomes and providing direct feedback can help learners to improve in their comprehension of the materials learned. Cognitive learning theory is based on the principle that the "duration in working memory is approximately 20 seconds" (p. 20). Providing information in small chunks, placing important information in the center of the screen, explaining why the learners are given specific information and enabling learners to read (even figures) from left to right are some cognitive strategies that can be practiced in online classes. Constructivist strategies emphasize the importance of the learners' own interpretation and knowledge construction. Interactive sessions, meaningful activities and assignments focused on practice are some ways to include constructivist learning strategies in online class environment (Nafukho, 2007).

Yet, according to Ertmer and Newby (1993) behaviorist, cognitivist and constructivist school of thoughts overlap and these three theories can form a taxonomy for learning. Ally (2004) proposed the importance of addressing ‘what’, ‘how’ and ‘why’ in online class environment. “Behaviorists' strategies can be used to teach the “what” (facts), cognitive strategies can be used to teach the “how” (processes and principles), and constructivist strategies can be used to teach the “why” (higher level thinking that promotes personal meaning and situated and contextual learning)” (p. 19). Recent research however, emphasize on the constructivist learning theory and proposes that learning in adulthood is context based and adults learn the best when they can relate their learning to previous experiences and present situations (Chen, 2010; Nafukho, Amutabi & Otunga; Ruey, 2010; Yang, Yeh & Wong, 2010).

Review of Relevant Literature

Hrastinski (2008) conducted a systematic literature review and identified thirty-six empirical studies focusing on the online learners’ perception regarding learner engagement. It was established that most of the studies used low level conception of online participation (e.g. frequency counts). Some studies however, considered learners’ perceptions. Hrastinski viewed online participation as a complex process consisting of the actions like “doing, talking, thinking, feeling and belonging” (p. 1760)

In the literature, several terms have been used to refer to online learning including e-learning, virtual learning, web-based learning and more recently mobile learning. In this chapter, online courses/classes are simultaneously used with computer-mediated classes and e-learning classes. “An online course is defined as one for which

all regularly scheduled classroom time is replaced by required activities completed at distance and managed online” (HCC, 2009, para. 2). Different learning management systems (LMS) such as blackboard, Moodle, MCampus, and eCampus support designing and delivering of online classes. The concept of creating student engagement is not new. Research reveals numerous practices that lead to student engagement especially in online courses. Abrami et al., (2011) emphasized the importance of interaction in online learning and observed, ‘An interaction is commonly understood as actions among individuals’ (p. 84). Four types of interactions aimed at student engagement in online courses have been identified in the literature namely; student faculty interactions which includes communication in the form of chats, emails, and video conferences, , student content interactions that requires learners’ accessibility with ease to the course materials and information provided in online class environment, technology student interactions which enable learners to navigate the learning management system and various technological tools that aid in delivering content, and interactions among students which involves the communication and exchange of information in chat sessions, discussions, groups work and team activities among the learners. (Abrami et al., 2011; Angelino, Williams & Natvig, 2007; Chen, 2007). These four types of interactions play a significant role in determining the learners’ level of engagement in online courses. Vrasidas and McIsaac (1999) observed that these interactions in online classes are important and help engage students. They emphasized the need for online facilitators to pay attention to the occurrences and effects of these interactions when designing and delivering online classes.

Cole and Chan (1994, p. 259) defined student engagement as “the extent of students’ involvement and active participation in learning activities”. Three interrelated student engagement strategies include: behavioral engagement, emotional engagement, and cognitive engagement (Fredricks, Blumenfeld, & Paris, 2004). Emotional engagement can be achieved through the emails, and conversations with faculty and fellow students enrolled in the course. Cognitive engagement is achieved through the assignments and activities aimed at promoting learning. Class participation and learning activity tracking tools can help achieve information about behavioral engagement (Yang, 2011). The search of online engagement strategies in this chapter was guided by the above mentioned four interactions and three engagement strategies in a broad spectrum. Chen et al., (2010) identified strategies of student engagement, “student-faculty interaction, cooperation among students, active learning, and prompt feedback, time on task, high expectations, and respect for diverse talents” (p. 1222). It is considerably important to find out the effectiveness of these strategies in computer-mediated classes based on the existing empirical evidence hence, the significance of this chapter. This section is further elaborated in the findings section as the literature review.

Method for Selection of Studies

We reviewed empirical literature on online engagement strategies within the field of education and distance learning. In addition, a search for peer reviewed journals on the topic of student engagement in online courses was conducted. The databases used included: ProQuest, ProQuest Dissertation and Thesis ProQuest, Central Academic Search Complete (Ebsco), Education Journals, Education Periodicals, Social Sciences

Full Text (Wilson), Social Sciences Citation Index (SSCI), Education: a SAGE Full Text Collection (CSA), ERIC, SAGE, , Emerald, and Google Scholar.

The literature review was restricted specifically to articles on eLearning, online learning, distance education, web-based learning and computer mediated instruction. Additionally, we used key search terms such as student engagement, engagement strategies, computer-mediated classes, web class, online training, students' perspectives, class structure, virtual learning, and attention in online classes. These terms have been mentioned in articles on student engagement in online learning environments. The search generated over a thousand studies on distance education. We only included empirical studies conducted on the topic of student engagement in online courses for a period of ten years (2003 -2013). This was done to address the recent technological sophistication, and globalized corporate and educational needs that shaped and modified the attitude and skills required to empower online learning environment in past few years. Some older publications are used for conceptual purposes and as secondary sources to support or refute arguments evolved in the process of achieving the purpose of the study. Among them 25 articles addressed class engagement strategies in educational setting using the term 'class engagement'. Ten of them were empirical studies that addressed students' and/or instructors' viewpoints in the study.

The collected articles are stored in a portable hardware device and are categorized in different folders. For example, articles addressing collaborative learning environment are clustered in one folder. Some articles touch more than one factor. They

are included in relevant folders. The folders helped organize the data and also guided the findings.

Cooper (1982) explicated five stages of performing literature review: (1). ‘problem formulation’, (2). ‘data collection’, (3). ‘evaluation of data points’, (4). ‘data analysis and interpretation’, and (5). ‘presentation of results’ (p. 291). The five stages guided this present literature review. Jackson (1980) pointed out that “A good review of research should explore the reasons for the differences in the results and determine what the body of research, taken as a whole, reveals and does not reveal about the topic. The details of that selection should be reported so that they can be critically examined by the readers” (p. 439, 457). This presented the previous studies and identified the strategies in detail to enable the readers to judge the effectiveness and practicality of the findings.

Findings

A number of studies revealed there was a relationship between online class attendance rates and students’ attrition rates (Kinlaw, Dunlap & D’Angelo, 2011; Grabe, Christopherson & Douglas, 2005; Gump, 2004). Thus, besides attendance rates and attrition, the focus of this was to establish online class engagement strategies aimed at motivating learners and promoting learning.

Wu et. al., (2008) acknowledged the differences in traditional class environment setting and that of online classes. The authors noted that e-learning was capable of influencing the capabilities of stakeholders especially learners and the instructors and observed that an “existing E-learning participant must seriously rethink how to rebuild new technological and learning delivery capabilities. Attempting to duplicate the

previous technological knowledge and learning model is impractical” (p. 1864). This means that instructors and learners must continuously seek to be creative and innovative in their teaching and learning respectively.

A study conducted by Allen and Seaman (2010) involving 2,500 colleges and universities revealed that sixty three percent of reporting institutions confessed that online learning was a crucial part in their long-term strategy. While Aslanian and Cline (2012) study of 1,500 individuals, who were enrolled, recently enrolled or were planning to enroll in online classes, revealed that eighty per cent of the online students lived within 100 miles of the campus. Thus, physical proximity from campus, lower cost, shorter duration of course, and flexibility acted as motivators for the online students in this study. Among the setbacks of online learning, thirty-seven per cent of the study participants pointed out that lack of direct interactions with instructors and fellow students, twenty five percent complained about poor communication with the instructor, and twenty percent reported the issue of attention, lack of motivation and challenges in virtual learning environment. The study acknowledged the recent trends in online learning along with its challenges and opportunities.

Online courses have been available for more than 25 years, but only recently has technology caught up with online students’ desire to feel a sense of individuality in the online learning environment. Online learning not only allows institutions to serve more students at a lower expense, but it also improves teaching methodologies, enhances the learning experience, and increases interaction

among students and instructors, sometimes even beyond the interaction possible in a traditional classroom (Aslanian & Cline, 2012, p. 5).

Yang, Yeh and Wong (2010) pointed out the significance of creating social interaction in online class environment. This chapter highlighted the implication of social constructivist theory in the context of computer-mediated learning. On the importance of this philosophy on learning, they noted, "... constructivism emphasizes the importance of context during the construction of knowledge and the role of social interaction in promoting learning" (p. 288-289). In the study, a total of 46 undergraduate students from a University in Taiwan, were asked to post and repost their texts. Students' first and final draft, action logs (recorded on the system), and a semi-structured interview were used to collect data. It was established that active and passive social interactions in a learning community played a significant role in students' learning. Yang et al., suggested that teachers needed to encourage students to have active social interactions to avoid isolation in learning community. Study participants acknowledged the usefulness of interaction with peers and teachers in order to improve their quality of learning.

Vonderwell (2003) explored the experiences of students in a computer-mediated class and tracked communication perspectives in asynchronous communication. The study used a case study approach to collect the experiences of 22 undergraduate students in a large Midwestern university. Also, asynchronous discussion transcripts, email transcripts and review by two independent reviewers were used to collect and analyze data. Participants pointed out that online environment created a sense of anonymity and

as a result, they could ask the instructors more questions compared to what they asked in a face to face class. Study findings revealed that computer mediated communication acted as a drawback in creating collaborative learning environment. Participants felt a lack of relationship with the instructors and students in the same class. The delay in immediate feedback was also pointed out. Compared to face to face classes where questions are answered right away, in computer-mediated classes students have to wait for the responses. The study also found out that students highly appreciated when the teacher provided feedback in a timely manner.

Boling Hough, Krinsky, Saleem and Stevens (2012) conducted a qualitative case study capturing the responses of six professors and ten students to find out strategies for creating effective online class experiences and to identify areas that hindered the same. This study does a remarkable job in capturing not only students' perspectives but also the instructors' views in designing online classes. The authors used a Cognitive Apprenticeship Model to analyze data. The findings of the study revealed that text based learning and disconnections in the class act as barrier in creating engaging online class. On the other hand, real world related projects and social interaction help creating effective online classes. The authors pointed out the importance of creating a learning community, providing personalized experiences to the students, designing courses using proper technology, and forming supportive community (for both students and faculties) to learn from each other.

Wu, Tennysonb and Hsia (2010) proposed a research model that could be used to understand the level of satisfaction for students in blended e-learning classes. The study

was based on social cognitive theory. A questionnaire survey was used to collect data from 212 college students taking online courses in Taiwan who participated in the study. It was found out that self-efficacy, performance expectations, system functionality, content feature, interaction, and learning climate were the key factors to determine students' satisfaction in computer-mediated learning. In addition, content and level of interactions influenced learning climate positively.

Xie, Miller and Allison (2013) in their study proposed a social conflict evolution model that involved five phases: “cultural initiation, social harmonization cycle, escalation of conflict, intervention and stabilization, and adjourning” (p. 412). The authors suggested that the model could help in designing learning activities in a way that could reduce the chances of conflicts. Social conflicts arising in online classes often go unnoticed and have potential to affect learners in a larger scale. The study followed a case study approach to study 18 participants enrolled in an online class in Southeastern United States that was designed following the constructivist theory. It was established that teachers' presence could direct discussions towards mastering the content rather than involving personal argument. The authors also highlighted the importance of creating social harmony in the online class environment. On the importance of the active participation by the instructor, it was noted, “online instructors should pay special attention to tension and encourage internal normalization within the learning community” (p. 412).

Chen, Lambert and Guidry (2010) found a relationship between the use of technology and student engagement. Using right technology helped improve students'

perceived learning outcomes. The authors used the data from National Survey of Student Engagement (NSSE) administered in 2008 by Indiana University Center for Postsecondary Research. The study findings revealed that students who lived away from campus were prone to take online classes and used technology to enhance learning. It is important for the students taking online classes to be provided with information regarding resources and help whenever they were faced with technological difficulties. Individual and institutional characteristics, like employment, financial support and child care played a role in students' selection of online classes.

Table 1 provides a summary of empirical findings of online student engagement strategies including the advantages of the engagement strategies from both the lenses of the course facilitators and the students.

Table 1. Empirical Findings of Online Student Engagement Strategies Capacity

Author and Year	Method	Online Engagement Strategies	Advantages	
			Teacher Perspectives	Student Perspectives
Xie,et al (2013)	A case study including 18 students in an online class. qualitative open coding and content analysis method used to analyze data collected from asynchronous discussions and course materials	1. Monitor discussion regularly to direct the discussions towards the intention of creating mastery of the content 2. Incorporate collaborative works in the beginning and assignments that involve arguments like debating etc. can occur when the learning community is formed	1. The 'teacher presence' reduce chances of conflicts 2. Create positive social environment in the class	1. Positive learning environment denotes higher level of learning. 2. Learner satisfaction is achieved.

Table 1. Continued

Author and Year	Method	Online Engagement Strategies	Advantages	
			Teacher Perspectives	Student Perspectives
Kim (2013)	Different sizes of discussion forums (class wide discussion and small group discussions) were used in a completely online class. The number of hits and messages was counted to measure the overall quantity of the participation in each discussion forum	1. Encourage learners to read, respond and learn from peer posts 2. Divide learners into small group	1. Increase level of reflection and understanding in terms of the content 2. Increase level of interaction	1. Encourage interactions 2. Create increased involvement
Boling et al (2012)	A qualitative descriptive case study involving 6 instructors and 10 students was used to reveal information about what helps create effective online experiences.	1. Create assignment on real world issues 2. Use text, graphic, audio and video to deliver the content (multi model) rather than just using text based lectures 3. Provide individualized feedback 4. Promote social interactions through formal and informal meetings using tools like second life etc. 5. Form support network among faculties	1. Dynamic, and interactive environment helps engage students 2. Faculties can learn from each other to be up to date with the use of recent technology in the classroom	Personal connection makes learning enjoyable to learners
Chen et al (2010)	262 students from two online	1. Create an open, interactive, and	1. Understand students'	1. Students' needs of

Table 1. Continued

Author and Year	Method	Online Engagement Strategies	Advantages	
			Teacher Perspectives	Student Perspectives
Clayton et al (2010)	certification program participated in an online survey for the study that proposed and tested a model of self-determination theory for online learner motivation.	learner-centered atmosphere for students to freely express their feelings, thoughts, and concerns. 2. Understand students to provide support based on students' needs.	needs 2. Provide customized facilitation to the students.	relatedness, autonomy, and competency satisfied. 2. Help reduce uncertainty and anxiety and enjoy learning.
	A survey including One hundred thirty-two post-secondary students soliciting their preferences for learning environments, rational for their preference, their motivational orientation towards learning and learning strategies used.	1. Direct interaction with professor and students 2. Immediate feedback 3. Relationships with faculty And students	1 Create 'Learner–instruction match' 2. Create positive learning environment	1. Get personalized learning experiences. 2. Receive Engaged learning experiences.
Nagel and Kotzé (2010)	Two surveys (Course feedback and Community of Inquiry survey) consisted of qualitative and quantitative data.	1. Provide systematic and easy to follow resources 2. Corrective feedback 3. Peer review among students 4. Technology related support/information	1. Help form social community 2. Promote new ideas and creativity	1. Resources help students get acquainted with the course. 2. Corrective feedback and peer review help students

Table 1. Continued

Author and Year	Method	Online Engagement Strategies	Advantages	
			Teacher Perspectives	Student Perspectives
Ruey (2010)	Data collection included interview of 21 students and instructor, course contents, documents, and student activities in two online classes offered in two different semesters. The qualitative data is analyzed using content analysis approach. Constructivist instructional principles are followed.	1. Provide Self-directed Learning: letting learners facilitate discussions. 2. High-quality learning: Fair assessment policy 3. Pragmatic and supportive learning: content related to everyday practice 5. Collaborative learning 6. Interactive learning: Group projects	1. Positive and encouraging comments increased retention rate. 2. Interactions among students created a sense of community in the class.	understand course expectations 1. Learners felt ownership of the learning content. 2. Clear assessment criteria increased students' enthusiasm. 3. Easy to follow and practice oriented course content helped increase confidence. 4. Interactions with peers in asynchronous discussions and group projects were exiting to the students.

Discussion

Brooks (2012) referred to the recent changes in online education as a tsunami in education. In 2010, the US department of education conducted a meta-analysis study and concluded that online learning using suitable tools can be engaging and interesting than face to face classes. Christensen and Eyring (2011, p. 47) termed online learning as ‘disruptive innovation’. Aslanian and Cline (2012) admitted optimistically that with proper use of technology and communication tools, an online class can be even more engaging than traditional classroom. On this note, this section discusses in detail the student online engagement strategies mentioned earlier. Student engagement strategies indicated in the previous section, can be clearly categorized into five sections: Creating and maintaining positive learning environment, building learning community, giving consistent feedback in timely manner, practicing flexibility using right technology to deliver the right content, and providing proper support system.

Creating and Maintaining Positive Learning Environment

Clayton, et al., (2010) coined that learners’ motivation can be directly linked to their learning experiences. Hence, motivation could be the key to achieve learners’ attention. Gagné and Deci (2005) pointed out that tangible external factors like deadlines, and rewards are often detrimental to cognitive ability, creativity and problem solving. The authors also advocated that promoting a healthy competitive environment increased the learners’ motivation. Perkins and Murphy (2006) observed that promoting critical thinking in a safe learning environment could create positive learning

experiences. Debating, evaluating, making judgment about issues can trigger critical thinking among learners.

Building Learning Community

Lapadula (2003) advocated that students often look for online community as they prefer to interact with other students and their professors. This online collaborative environment is helpful in creating student satisfaction. On the importance of creating an interactive learning environment online, it was observed, “Online students sought constructing interpersonal and social relationships with their instructor. Students indicated that the asynchronous discussion questions in groups helped them learn the content” (Vonderwell, 2003, p. 87). Nagel and Kotzé (2010) used the term ‘teaching presence’ (p. 5) to denote learners’ need in web based courses. The authors added that highly cognitive feedback from the peers and instructors ensured social presence. “Highly valued cognitive feedback elicited affective reactions and feelings of connectedness also contributing to social presence” (p.5).

Giving Consistent Feedback in Timely Manner

The best engagement strategies recommended by all studies reviewed involved timely providing feedback to online students and ensuring the students are engaged throughout the semester. Vonderwell (2003) noted that usually in the beginning of the semester, the professors are regular with the feedback. The alacrity slows down over time. This affects students’ engagement adversely. Therefore, it is important to provide consistent and timely feedback to students. Also, sometimes, students need to be helped

to get the answers themselves, rather than just giving them the answer right away. The study conducted by Nagel and Kotzé (2010) highlighted how learners valued constructive feedback from the instructors and peers. Gagné and Deci (2005) proposed that positive feedback promotes intrinsic motivation, which is important in creating positive learning environment. Again, Miltiadou and Savenye (2003) proposed that positive feedback, praises in the form of recognition for good work and constructive comments can create extrinsic motivation among learners.

Using Right Technology to Deliver the Right Content

Innovative use of learning management system (LMS) can produce learner engagement. Nagel and Kotzé (2010) pointed out that efficient use of available technology can improve the quality of teaching even in large online classes. Use of tools like Skype, and blackboard collaborate can be used to promote interaction between the instructor and fellow learners. In addition, e-mail, synchronized and asynchronized chat sessions can enable learners to be in the learning loop and to remain engaged.

Providing Proper Support System

Previous research highlighted the importance of providing right resources to the students. Wua et al., (2010) pointed out that the contents included in a computer-mediated class help increase student engagement and student satisfaction. Chen et al., (2010) proposed that instructors need to be careful of using the right technology in designing and delivering online course contents. Nagel and Kotzé (2010) stated that systematic and easy to access resources like, library, databases, and Turnitin (to deal

with plagiarism) can help learners feel confident in the class. The authors further noted that sometimes the learners in online courses may not be able to take full advantage of the available resources due to lack of computer knowledge and technological hitches. They pointed out that open communication with learners and tracking their activities in course LMS can help tackle this issue.

Instructors must ensure that students who enroll in online courses are provided instruction on how to access the learning resources that are available to them online and offline. Institutions may also want to provide personal assistance in dealing with academic difficulties and technical problems to online students who do not have the benefit of personal contacts with faculty and fellow classmates as in the face-to-face classrooms (Chen et al., 2010, p. 1229).

Chen (2007) advocated for an approach blending constructivist and objectivist learning. In the author's own narration, "the objectivist-constructivist blended design approach may be employed because constructivist instructional design has the strength to result in meaningful learning whereas objectivist instructional design has the advantage to produce efficient learning". (p. 83). Table 2 which was constructed from empirical studies reviewed outlines successful design and delivery of assignments and learning activities grounded in constructivist approach which however, requires time, energy and motivation from both the students and instructors.

Table 2. Online Class Engagement Strategies

Strategies	Learning Activities	Rationale
Creating & maintaining	<ul style="list-style-type: none"> Promoting healthy competition 	<ul style="list-style-type: none"> Healthy competitions among students can encourage learners

Table 2. Continued

Strategies	Learning Activities	Rationale
positive learning experience	<ul style="list-style-type: none"> • Encouraging critical thinking through assignments and activities 	<ul style="list-style-type: none"> • to excel • Practicing critical thinking in a safe environment helps increase intrinsic motivation
Building Learning Community	<ul style="list-style-type: none"> • Encouraging group work • Encouraging peer feedback on assignments • Offer collaborative activities in the beginning of the course • Offer activities involving arguments (debate etc.) later during the semester • Initiating synchronized and asynchronized chat sessions and phone conversations • Asking learners to introduce each other through the course website • Design assignments that require interactions with professionals in higher education • Use tools like Wimba and second life to increase interactions. 	<ul style="list-style-type: none"> • Working together produce shared goals • Peer feedback gives sense of togetherness • Helps build trust and relating among learners • Helps in reducing chances of conflict and also use critical thinking in a positive learning environment • Increased interactions provide support and create a sense of community where learners learn from each other • Knowing each other and instructors enable learners to connect and not feel isolated • Interacting with professionals can enrich learners' experiences and help increase interactions in online learning community • Learners can interact in formal and informal meetings
Giving Consistent Feedback in Timely Manner	<ul style="list-style-type: none"> • Providing cognitive feedback on course assignments • Including voice comments in paper • Providing feedback 	

Table 2. Continued

Strategies	Learning Activities	Rationale
Providing Proper Support System	within couple of weeks	
	<ul style="list-style-type: none"> • Providing detailed feedback 	
	<ul style="list-style-type: none"> • Easy access to resources 	<ul style="list-style-type: none"> • Increase learners' confidence
	<ul style="list-style-type: none"> • Listing additional resources on course website 	<ul style="list-style-type: none"> • Learners know where to get additional help
	<ul style="list-style-type: none"> • Providing a navigation video with course introduction on the course home page 	<ul style="list-style-type: none"> • Learners feel welcomed in the class and also get acquainted with the LMS through which the course is delivered
Using Right Technology to Deliver the Right Content	<ul style="list-style-type: none"> • Providing audio recorded weekly wrap ups 	<ul style="list-style-type: none"> • Provides personal touch to the course
	<ul style="list-style-type: none"> • Using Skype, whiteboard, blackboard collaborate, and articulate whenever necessary 	<ul style="list-style-type: none"> • Using required tool enhance interactions between learner to learner, learner to content and learner to instructor
	<ul style="list-style-type: none"> • Providing easy to follow instructions and guidance 	<ul style="list-style-type: none"> • Helps learners to be comfortable with the technology

Implications

This chapter has implications for both academic and professional settings.

Professional Settings

Bonk (2002) proposed that organizations are inclining more and more towards online training. Trainees can complete training at their own pace any time that is convenient for them. The convenience of providing a lot of information to workers in

different locations and of tracking learners' progress attracts companies to offer online training. Although associated with an initial cost, online learning means saving money for the organizations. Welsh, Wanberg, Brown and Simmering (2003) proposed that companies find

Turning to e-learning as a cost-saving measure, particularly when they want to reduce travel and classroom costs, and time off-the-job, associated with off-site training. An example from our SME organizations is Dow Chemical, which estimates that it saved \$30 million in 2000 by implementing an asynchronous, Web-based system. Approximately \$20 million of the savings was due to a reduction in the time employees spent in training, with the additional \$10 million of savings due to a reduction in administrative time, cost of classroom facilities and facilitators, and cost of printed materials (p. 249).

Bonk (2002) is optimistic about the future as the number of online training courses were projected to increase tremendously in professional settings. The findings from this study can help create engaging training sessions.

Educational Settings

Learning management systems (LMS) like, moodle, mcampus, eCampus, and Blackboard are being used for designing and delivering online classes. In next few decades the number of courses offered online is going to increase (Moore, et al., 2011). The instructors' attempt to make the classes engaging and interesting to the students will contribute to the popularity of online courses among learners. The findings from this chapter can help identify areas where the instructors and designers of online classes need

to focus. One of the findings suggests that students need to be provided with clear instruction regarding how to access course content and learning activities. For example, brief introductory navigation and tutorial videos could help establish course clarity and expectations right from the start of the course. The authors of this chapter, who have been facilitating online courses for over 5 and 12 years respectively have effectively used navigation videos including instructions on how to upload a file or how to post in the discussion forums. The satisfaction rate among students enrolled in online courses tremendously increased when these brief videos were introduced. One of the important findings regarding student engagement in online courses noted that interactions help students with the course work and timely completion of course assignments and projects. Therefore, video conferencing can be successfully incorporated in online courses to enhance interaction.

Limitations and Future Research Areas

This chapter has some limitations. But each limitation presents a potential future research area. First, the chapter adopted a literature review approach. Relevant studies are discussed following a content analysis method. Nevertheless, more research both quantitative and qualitative is needed to support the benefits of engaging students in online courses. Again, the studies included in this chapter, mostly addressed learners' perspective in drawing the research findings and conclusions. It is significant to include the professors or instructors' views about online class engagement strategies. Means, Toyama, Murphy, Bakia and Jones (2010) proposed that instructor's perspective on improving online classes can reveal various strategies aimed at improving computer-

mediated class engagement strategies. The authors in this chapter identified how online class strategies can benefit the instructors. Hence, empirical studies need to address both students' and professors' perspectives.

Second, this chapter proposed that individual and institutional characteristics play an important role in promoting learner satisfaction in online courses. Studies are required that can explore this aspect in detail. Chen et al., (2010) proposed that “certain types of students including racial and ethnic minorities and part-time students are more likely to take online courses. We also found that senior college students majoring in professional fields and first-year business students more frequently take online courses than students in other fields” (p. 1229) . Further research is needed to explore the issue of whether culture and context play any role in determining learners' reactions towards similar learning activities. Therefore, research needs to address whether factors like culture, race, ethnicity, educational experiences, financial status, personal and professional responsibilities, and physical condition could be having any relationship with effective student engagement and learning in online courses.

CHAPTER III

THEORY IN ONLINE LEARNING: A DELINEATION OF STUDENT-CENTERED APPROACH ²

Synopsis

Engaging today's technology savvy generation virtually, requires careful understanding of online class environment along with exploring revised strategies. Optimum use of online class tools needs solid theoretical foundation. The purpose of this chapter was to explore the role of constructivist learning theory, social learning theory and transformative learning theory in online class environment. The chapter also depicts current research highlighting each theory in the light of online class environment. Three theories (constructivist learning theory, transformative theory of learning and social learning theory) are discussed in the context of teaching presence, social presence, and cognitive presence. The chapter contributes towards improving learners' experiences by suggesting strategies that are supported by solid theories. Also, the chapter identified some future research areas that require empirical evidences.

Introduction

Today's technology savvy generation is referred to as 'net generation' because of extensive and regular use of internet in their everyday education and work related activities (Harasim, 2012). Engaging the new age students and workers require careful

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understanding of online learning environment. Instead of teaching trainers specific tools, effective online learning experiences demand holistic comprehension of virtual learning strategies. Commonly, web is used in classes to deliver: 1. Lecture/slides, 2. Quizzes/tests, and 3. Communication among students and trainer/instructor (Cho & Cho, 2014). However, optimum use of these apparently simple tools in the right places, at right time and using suitable technological aids require appropriate strategies. Harasim (2012) suggested “...There is a need to reflect on our theory of learning (even if it is implicit), and to rethink and reassess our teaching practices and pedagogical approaches in relation to the opportunities afforded by online technologies.” (p. 3)

The theoretical foundation in teaching and learning is both praised and judged at the same time. Proponents of practicing theories emphasized on the opportunity of understanding the big picture of learning and teaching through relevant theories (Anderson, 2008). This understanding is beneficial in justifying our actions and applying it in other contexts. “This broader perspective helps us to make connections with the work of others, facilitates coherent frameworks and deeper understanding of our actions.” (p. 33). The solid theoretical foundation validates specific strategies that are followed in classes. On the other hand, critics of theories (e.g. Wilson, 1999) pointed out the felony of strictly following preconceived notions and ignoring the scope of thinking outside the box. The purpose of this chapter is to explore the role of Constructivist Theory, Social Learning Theory and Transformative Learning theory in online learning and to propose relevant theories with specific design and delivery components that can be included in online learning.

This chapter explores the role of theories in online class environment. The terms e learning, online learning, virtual environment, computer-mediated learning, distributed learning, network learning and distant learning are used synonymously in this chapter and is defined as the learning process that uses technological tool (computer) to provide learning content and to create learner-learner and learner-instructor interactions (Chen, 2007). Although, the subtle differences among the terms are pointed out in literature, exploring the differences are considered out of the scope for this chapter. In broad term, online learning is defined here as 'instructions delivered via web'. The chapter focuses on three theories, relevant to the online class environment. The theories are selected on the account of their extensive use in leading online learning literature.

Rubin, Fernandes and Avgerinou (2013) delved into the use of Community of Inquiry (CoI) model in inline class environment.

Successful online courses create a Community of Inquiry (CoI) where students interact with one another, the instructor and the learning materials to develop new knowledge and skills. When online courses have a strong CoI, students participate in discussions, perceive that they learn more, are more satisfied with the learning experience and have greater retention. (p. 49)

The components of CoI model i.e. teaching presence, social presence and cognitive presence are explored in the light of three theories in lone class environment. Teaching presence is defined in this chapter as the role of teachers or instructors in the online class environment. Anderson (2008) defined teaching presence as facilitation of classes to produce meaningful educational experiences. Cognitive presence is defined as

the exploration and integration of cognitive understanding (Garrison & Anderson, 2003). Social presence is defined “as the ability to project one’s self and establish personal and purposeful relationships” (Garrison, 2007, p. 63). Increasing trend of providing online classes is noticeable in both professional and educational settings. Technological sophistication, emerging interfaces, innovation, rising schism, and various choices of learning management systems and complex system of interactions need theoretical foundations to understand and address complicated use of technological tools to practice effective online teaching and learning.

Garrison and Anderson (2003) asserted that the inclusion of technology in education increases learner satisfaction and factors like teaching presence and teacher immediacy play significant role in this respect. Anderson (2008) suggested that online learning is capable of helping learners improve argument formation, critical thinking, written communication, reflective deliberation and computer skills (p. 253). Nevertheless, providing “epistemic engagement” ((knowledge based and theory based learning) (Larreamendy-Joerns & Leinhardt, 2006, p. 21) to learners is challenging in an environment where learners and instructors are physically away from each other. Hence is the requirement of sound theories to understand the purpose and process of online interfaces.

The importance of sound theory is prevalent in available literature. The complexity of a situation is best explained by a well-suited theory. According to Hall and Lindzey (1957) a good theory simplifies complexity of events. Therefore, theory is indispensable in understanding the present situation and therefore, attempting to improve

it. The authors informed that the function of a theory "is that of preventing the observer from being dazzled by the full-blown complexity of natural or concrete events." (p. 9).

Bacharach (1989) proposed that the purpose of a good theory is to 'organize' and to 'clarify' (p. 496). Bacharach defined theory as

A statement of relationships between units observed or approximated in the empirical world. Approximated units mean constructs, which by their very nature cannot be observed directly (e.g., centralization, satisfaction, or culture).

Observed units mean variables, which are operationalized empirically by measurement (Bacharach, 1989 p. 498).

Theoretical Framework

The Community of Inquiry (Col) model proposed three components: teaching presence, social presence and cognitive presence (Figure 1). The Col model supports and stipulates epistemic engagement of learners (Garrison, Anderson & Archer, 2000; Garrison, Anderson & Archer, 2001). Figure 1 is the community of Inquiry model (Col) that depicts the interaction among social presence, cognitive presence and teaching presence. The common area, called 'educational experience', is the focus of any educational endeavor (McKerlich & Anderson, 2007). Lipman (2003) avouched that the Col concept was restricted to science when Peirce first proposed the concept. Dewey (1992) first applied it in educational setting. The concept of contracting knowledge through sharing and understanding in classroom attracted theorists and researchers (Garrison, Anderson & Archer, 2001).

Shea and Bidjerano (2010) discussed the application of Col concept in online learning. The authors emphasized on participatory perspective of online learning: “In this conception, online environments support knowledge construction through social interaction and negotiation of meaning largely through asynchronous communication” (Shea & Bidjerano, p. 1722). TLarreamendy-Joerns and Leinhardt (2006) pointed out inadequacy of interaction in online class environment. In this chapter, three theories are discussed in the context of four components of Community of inquiry model, namely, Teaching presence, and cognitive presence, social presence. Figure 1 depicts interaction among social presence, cognitive presence and teaching presence (Swan et al. 2008).



Figure 1. Community of Inquiry (CoI) Model. (Swan et al. 2008)

Purpose and Research Questions

Driscoll (2000) defined learning as “a persisting change in human performance or performance potential...[which] must come about as a result of the learner’s experience and interaction with the world” (p. 11) This definition emphasizes on

learners' experiences and interactions. Learners' experiences are important components of constructivist learning theory (Savery & Duffy, 1995). On the other hand, interactions are significant in social learning theory (Yu, Tian, Vogel & Chi-Wai Kwok, 2011). Again, e learning promotes critical thinking skills, and within the scope of a learning community, learning then becomes transformative (Yuzer and Kurubacak, 2010).

The purpose of chapter is to explore the role of constructivist learning theory, social learning theory and transformative learning theory in online class environment. The chapter also depicts current research highlighting each theory in the light of online class environment. The following research questions guided the study:

1. What are the significance and roles of constructivist learning theory, social learning theory and transformative learning theory in online class environment?
2. What factors or constructs in the online class environment may facilitate transformative learning, constructivist learning and social learning?

Method

Data Collection, Data Analysis and Data Storing

To address the research questions, a literature review approach is adopted. I performed a thorough search for training transfer and related studies and drew literature from multiple disciplines (e.g., psychology, vocational behavior, communication and management) which have influenced the field of online education. Searches were conducted on selected American Psychological Association journals and American Counseling Association journals. The initial search resulted over 5000 articles. After

reading the abstract 1000 were short listed. After applying the following search criteria, 50 articles are found relevant and are included in this chapter.

Search Criteria

1. Peer reviewed journal articles
2. Articles relevant to the topic, i.e. use of theory in online learning focusing on teaching presence, cognitive presence and social presence.
3. Articles published within 2000 to 2015 (Older publications are included to explain concepts and support arguments).

The collected data is organized and analyzed with the literature review matrix. I looked for the patterns of the data and sorted them into general themes. The themes are based on applicability and docility. For example, for constructivist learning theory, information obtained from the present studies is clustered into the following sections: provide ownership of the content, encourage incorporating alternative views, provide opportunity to reflect on the content etc.

In the following section, three theories (constructivist learning theory, transformative theory of learning and social learning theory) are discussed in the context of teaching presence, social presence, and cognitive presence. These theories are selected due to their relevance and their extensive use in available online class related research studies. Each theory section highlights strategies that can be applied in virtual environment. Also, some limitations are identified that the researchers need to be aware of while considering the application of these theories online.

Constructivist Learning Theory in E-Learning Classes

Jean Piaget is considered as the originator of constructivist theory, which is used to indicate the process of learning (Mezirow, 1990). This theory acknowledges learners' capability to construct knowledge from their experiences. Constructivist learning theory proposes that our previous knowledge and experience play significant role in our process of learning. "Constructivism is a philosophical view on how we come to understand or know. It is, in our mind, most closely attuned to the pragmatic philosophy" (Savery & Duffy, 1995, p. 89). Therefore, according to this theory, the learners are active participants in learning rather than being passive receptor of knowledge. The interpretation of knowledge can vary person to person. Hence, constructivist learning theory emphasizes on personalized learning experiences.

Social constructivism is popularly used in traditional class setting (Barker, Quennerstedt & Annerstedt, 2013). Social constructivism proposes that knowledge is constructed through interactions with others (Barker et al., 2013). The interaction and learning community formation are challenging in online class environment. This could be the reason for majority of the online literature using constructivism learning theory. Research propose the significance of the following interactive aspects while considering constructivist learning theory: frame of references of the learners, the learning process, learners' self-created personality or image, levels of communication and various incidents and conditions that take place during the learning. These five phases are useful in understanding the process of constructivist learning theory. In constructivist theory, holistic learning (providing broader picture of purpose and objectives of the content) is

important and instructor plays the role of a facilitator and/or advisor in guiding the learners' energy and efforts towards the right direction (Nafukho, 2007). As a result, constructivist theory promotes application of knowledge in different contexts. The learner centered approach of constructivist learning theory is often related to self-directed learning, where learners take charge of their learning process.

Current Research on Constructivist Learning Theory Related to Social Presence, Cognitive Presence, and Teaching Presence

Research studies (Ally, 2004; Chen, 2007), proposed the importance of practicing constructivist learning theory in online environment. Studies also established the role of this theory in the context of teaching presence, cognitive presence and social presence (Ally, 2004; Wang, 2011) In the following section, the importance of practicing components of constructivist learning theory in the light of teaching presence, cognitive presence and social presence is highlighted.

Learning As an Active Process

As discussed in the previous section, constructivism theory views learners as actively taking part in learning. Hence, constructivism promotes self-regulated learning and self-paced learning (Nafukho, 2007). The flexibility of time and space enables learners to access learning content whenever they want from any geographic location (Aragon, 2003). Hence, online learning requires learners' active participation. Nevertheless, instructor's guidance needs to be available throughout the process (Ally, 2004; Harasim, 2012).

Constructing Knowledge

In online learning environment, learners can get the scope of reflecting on the learning content, provided the class is designed following adult learning principles proposed by Knowel (1989). Chen (2007) proposed that students' higher order thinking skill can be well developed in online classes as they get time to reflect on their comments and assignments. Hence, it is possible that instead of just depending on the instructions, learners can use their cognitive knowledge to construct their own frame of knowledge reference. Instructors therefore, can help the students with facilitation and advising (Siemens, 2014).

Help Learners Achieve Learning Goals

Adult learners come with previously defined personal goal in order to apply their knowledge (Knowles, 1989). Stating course objectives and expectations clearly can help learners understand how the class can help them achieve their personal goals (Aragon, 2003; Siemens, 2014). It is possible in online environment to take care of learner's styles: auditory (including lectures), visual (including videos) and kinesthetic (including various activities) (Boling, Hough, Krinsky, Saleem & Stevens, 2012). Focusing on specific learning style can help learners achieve an engaging learning experience.

Interactive Learning

Contrary to the regular beliefs, online classes are capable of providing interactive learning experiences (Chen, 2007). Using proper technological tools and techniques can help create interactions in virtual classes. Four types of interactions are possible in

online classes: Interaction with instructor and learner, interaction with learning content and learner, interaction with learner and learning technology, interactions among learners (Hirumi, 2002; Siemens, 2012). Considering the interactions and focusing on them can help increase learner engagement in online learning environment.

Learning Strategies

Considering the existing research, it is found out that constructivist learning theory possess important role in guiding and enhancing teacher presence, cognitive presence and social presence strategies. As Nafukho (2007) suggested, “the constructivism school of thought argues that teaching is more efficient when students engage in activities within a supportive learning environment and when they get proper guidance mediated by learning tools” (p. 25). This section lists some learning activities that the instructors can practice in online classes to ensure teaching presence, cognitive presence and social presence. The learning activities are intended to influence learners’ motivation, cognition and affective learning.

Reflecting on the Content

Instructors need to provide opportunity to reflect on the learning content and also on the learning processes. The ability to reflect on the learning content and learning process can provide learning independence (Savery & Duffy, 1995). Learners need to be encouraged to present meaningful questions or discussions from the text. Also, giving opportunity to apply information (theories and concepts learnt) in class discussions, reports and projects can help understand the content and apply it in various contexts.

Incorporating Alternative Views

The learners need to be encouraged to not only accept but to welcome other's views. Diversity of ideas and concepts is the basic of innovations (Savery & Duffy, 1995). Activities like debating for a team that goes against the learners' core beliefs, discussing for and against a given topic etc. can help understand the existence and also importance of diverse views in education.

Provide Ownership of the Content

The learners are often focused on the grade and therefore tend to have a superficial approach towards the content. Aligning learners' goals with the objective of the class is the first step in creating ownership of the content (Blumenfeld, 1991).

Learners are also need to be given the freedom to make choices like, prepare a report, and work on a project or a creative video or presentation using the course content. This helps build ownership of the content.

Limitations

In spite of the above mentioned positive factors, it can be challenging to provide personalized learning experience for learners in virtual environment without careful considerations of details of constructivist theory. Especially, sometimes it is difficult to understand individual learners' perceived reality and accommodate learners' personal goals with that of the class (Boling et al., 2012).

Transformative Learning Theory in E-Learning Classes

According to Mezirow (1990), this theory is “the learning process by which adults comes to recognize their culturally induced dependency roles and relationships and the reasons for them to take action to overcome them” (p. 6). Merriam, Caffarella, and Baumgartner (2012) stated experience, critical reflection, and development as major concepts of transformative learning, where “adults make sense of their life experience” (p. 132).

Merriam and Caffarella, (1999) stated that transformative theory is about ‘change’. Transformative learning occurs when there is a change in the beliefs, behaviors, ways of thinking, or perspectives of an individual. This transformation can happen through a number of ways, primarily as the result of discourse and critical reflection, which has led to the development of a new perspective that the individual displays or acts out in their life (Merriam & Caffarella, 1999; Mezirow, 1990). Clark (1993) proposed that transformation often “shapes people; they are different afterward, in ways both they and others can recognize” (p. 47)

Current Research on Transformative Learning Theory Related to Social Presence, Cognitive Presence, and Teaching Presence

The transformative process includes the participation of the course instructor who aids in the process of transformative learning by serving in a facilitator role. In transformative pedagogy, the instructor’s role is to view teaching as a social process, allowing students to engage in their own learning by encouraging them to challenge social norms, question positions of power, engage in critical questioning, work

collaboratively, be creative, and practice democracy (Cranton, 2011). This way of teaching focuses on understanding social issues, invoking social action, and stimulating change by promoting a heightened self-awareness, through facilitative methods focused on communication, critical examination, and exchange of information (Meyers, 2008).

Dialogue/communication

Several authors (e.g. Boyer, Maher & Kirkman, 2006; Branshaw, 2009; Barraclough & McMahon, 2013; Enger & Lajimodiere, 2011; Rosenbloom, 2011) advocated the importance of communication in online class environment to promote transformative learning. Stacey (1999) proposed that

Social relationships maintained in online enabled the development of the trust and emotional support that facilitated computer-mediated social conversation and provided the learners with a context and stimulus for thinking and learning (p. 27).

Different tools like video and audio chats, sharing blogs, synchronous and asynchronous discussion sessions, and various communication channels can help adult learners communicate with each other and with the faculty in the class.

Sense of Learning Community

Anderson (2011) suggested that learning “happens as a result of close connection in cohesive social groupings or communities” (p. 110). On a similar note, Garrison (1996) advocated that social presence in some cases is necessary to sustain cognitive presence. Palloff and Pratt (1999) stated the significance of collaborative knowledge

creation in online class environment. Forming learning community often creates a safe environment where people freely share their views, challenge each other and transformative learning takes place (Branshaw, 2009).

New Technology

Technological sophistication if used effectively can help grasp content in computer based classes. Mezirow (1990) suggested that

As we move into the next century and more technologically sophisticated industry and service sectors, work becomes more abstract, depending on understanding and manipulating information rather than merely acquiring it skillset and support system to help learn new technologies (p. 7).

Educational institutions and instructors need to understand the influence of technology in transformative learning in online setting. Researchers (Vonderwell 2003; Davidson & Nadia, 2015) suggested that an “in-depth understanding of the attributes and the pedagogy of web-based instruction is important for successful utilization of technology tools for learning” (p. 78). Buchan (2011) highlighted the capacity of new technology in causing transformative learning experience.

Learning Strategies

Henderson (2010) proposed that transformative learning theory can help instructors guide their facilitation in online learning. This learning theory advocates for creating suitable environment, where the learners can have the ‘aha’ moments that change some perspective of their knowledge base and even in some cases it is capable of

changing their lives. The instructors can play significant role in designing and delivering content in suggested ways.

Encourage Applying Knowledge in Different Contexts

The opportunity of applying knowledge in real world scenario is capable of producing ‘aha’ moments for the learners. Encouraging students to work with related industry data is one way to get to know the professionals in the field and also witness the implication of knowledge in the practice (Davidson & Nadia, 2015).

Promote Critical Thinking

The ability to question the existing notion is significant in creating one’s own frame of reference. Promoting critical thinking can also ensure higher level of learning. Activities like critiquing article, debates, reflecting on own or others’ works and evaluating peer’s can help achieve this purpose (Davidson & Nadia, 2015).

Limitations

Mezirow (1990) advocated that any new learning does not lead to transformation. Transformation happens less frequently and usually associated with “disorienting dilemma” (Mezirow, 1990, p. 50). Hence, even if the instructor and class designer follow the guided principles, it is difficult to predict the occurrence of transformative learning.

Social Learning Theory in E-Learning Classes

Social learning theory is first proposed by Bandura (1970) and posits that learning often takes place in social context. The theory advocates that learners and environments are capable of influencing each other. Therefore, a person's behavior is capable of producing similar behavior. Hence, interactions play significant role in producing desired behavior in learners (Yu, Tian, Vogel, & Chi-Wai Kwok, 2011).

This theory portrays learners as not just recipient of information, but with cognitive capability. Environment and interactions can play role in learning. Modeling plays important role in social learning theory. Learner learns by verbal instructions that are direct and detailed, through media e.g. videos, audios etc. or by practicing the desired behavior (Yu et al., 211).

Current Research on Social Learning Theory Related to Social Presence, Cognitive Presence, and Teaching Presence

Bandura (1970) proposed that the modelling of behavior is dominated by sub processes, which are: attention (learners observe model behavior), retention (learners remember the behavior), reproduction (learners imitate or reproduce the behavior) & motivation (Learners decision to reproduce behavior. The implications of these sub processes in online environment focusing on teaching presence, cognitive presence and social presence are discussed in the following section.

Achieving Learners' 'Attention' in Online Classes

Effective use of proper technological tools is capable of attracting attention of the learners by providing them an engaging and interesting learning experience (Welsh, Wanberg, Brown & Simmering, 2003). Praising required standard in discussion boards and chat rooms can demonstrate expectations. Using graphics, videos, and interactive tools can help attract learners' attention (Boling, et, al., 2012).

Promoting Information 'Retention' in Online Classes

Retention is about storing information so that it can be used when needed. Learners' observed information can be tested using proper learning management system or LMS (Moore & Kearsley, 2011). Hence activities like quizzes, matching games, fill in the blanks can promote learners' retention. Learners' can be asked to watch a video and then discuss desired and undesired practices.

Encouraging 'Reproduction' in Online Classes

Repeating the learned behavior is significant in social learning theory. "Reproduction" can be promoted in online learning by providing scope to practice learned knowledge. For example, learners will try to follow the guidelines of a scholarly discussion post that has positive comments from the instructor.

Learning Strategies

Phillips and Burbules, (1995) proposed that social interactions are influenced by 'frequency and duration of contacts, tendency to initiate conversations, degree of co operations, feelings of attraction, respect, and even hostility, status differences etc.' (p.

9). This section depicts some applicable learning strategies that can be practiced online in the context of social presence, cognitive presence and teaching presence.

Ensuring Learners' Motivation in Online Classes

Learners need to get motivated in order to imitate desired behavior. Reinforcements and punishments can help motivate learners (Bandura, 1970). For example, possibility of earning extra credit points for providing productive peer feedback potentially motivates learners to provide productive feedback to other learners.

Social learning theory is widely used in face-to-face learning settings. Nevertheless, it has gained increasing popularity in its use in the online classes. Kim, Kwon and Cho, (2011) proposed that

Cognitive learning does not occur separately from affective learning and social dimension in class provides an impetus to form a sound learning community where students develop social bonds which support their academic success (p. 1513).

Because of the absence of visual and auditory signals in online environment, it is important to follow specific strategies to ensure required social interactions in online classes. The following activities can help guide practicing social learning strategies related to the role of faculty in achieving students' cognition through social learning.

Encourage Peer Feedback

“More knowledgeable others (i.e., peers) can support students as they develop knowledge and understanding” (Hill, Song & West, 2009, p. 92). Learners need to be

encouraged in virtual environment to form a constructive learning community and peer feedback can help in this respect (Boling, Hough, Krinsky, Saleem, & Stevens, 2012). Before uploading any assignment, the learners can provide each other feedback. The process helps in building trust and respect among the learners. Nevertheless, instructor plays significant role in convincing the learners not to take feedbacks personally and to the learners be professional in the process.

Promote Collaboration and Cooperation through Increased Interactions

Giving opportunity to work with each other in the form of group works can increase interactions and the learners get opportunity to observe and reproduce others' desired behavior. It is noted in the above discussion that teaching presence in the form of instructor's guidance, reinforcement and punishment play significant role in practicing social learning theory in online class environment. Hill, Song and West (2009) found out, interactions are "central to social learning theory .. enabled learners to create and distribute knowledge to promote understanding" (p. 93).

Ensuring Optimum Class Size

A study by Caspi, Gorsky, and Chajut (2003) proposed that class size is capable of affecting amount and quality of interactions. In a very large or in a too small classroom the instructor's post is reduced and as a result, learners' involvement is affected. In a very large class, the learners are overwhelmed by the discussions and this reduces participation. Palloff and Pratt (1999) suggested that an online class 15 to 20 learners, denotes the optimum class size.

Limitations

As the nature of interaction is different because of the distance in online classes, it is difficult to demonstrate model behavior to the learners. Also, reinforcing behavior is challenging in an environment where the learners and instructor cannot see each other. Hence, it can be challenging for the instructors to practice the above mentioned strategies based on social learning theory.

The following table (Table 3) summarizes the learning strategies related to each learning theory in the context of online learning.

Table 3. Online Learning Strategies in the Context of Social Presence, Cognitive Presence and Teaching Presence

Elements	Constructivist Learning Theory	Transformative Learning Theory	Social Learning Theory
Social Presence	Promoting Interactive Learning	Encouraging dialogue/communication through discussion threads, emails and chats.	Encouraging peer feedback
	Encouraging alternative views or different views	Learning from each other's' experiences and views	Promoting collaboration and cooperation through increased interactions
Cognitive Presence	Reflecting on learning	Learning new concepts and technology	Promoting information retention through activities and assignments
	Providing ownership of the content	Promoting critical thinking	Encouraging information reproduction through positive feedback and

Table 3. Continued

Elements	Constructivist Learning Theory	Transformative Learning Theory	Social Learning Theory
Teaching Presence	Helping learners achieve learning goals	Encouraging learners apply knowledge in different context	setting class expectations. Ensuring optimum class size though group formation etc.
	Making learning an active process involving learners	Creating a sense of learning community	Increasing learners' motivation in the class

Implications and Conclusion

The chapter explicated three theories and their application in online class environment. The field Human Resource Development strives for overall development of human potential through organization development, career development and, training and development (Swanson & Honton, 2008). The above discussions identified some key areas and/or strategies that contribute towards improving performance at individual and organizational levels. This chapter proposes approaches that strengthen understanding of online class strategies not only at the micro levels but also at the macro level to identify future research areas to enhance the online learning experiences at the global context. The limitations, identified in this study provide a scope for future research areas. Empirical research data (both quantitative and qualitative) is required to support the findings of this chapter.

This chapter identified some significant guides provided by social learning theory and constructivist learning theory, in practicing teaching presence, cognitive presence and social presence in virtual learning environment. Wicks (2009) highlighted the usefulness of practicing constructivist theory in social environment. “Social constructivists understand that learning takes place in a community setting, where instructors and students interact to construct meaning” (Wicks, 2009, p. 4). Again, Transformative learning theory advocates for promoting critical thinking in online classes. Encouraging critical thinking is important in meaning making construct for the learners (Carspecken, 2013). Therefore, there are overlapping factors in the three theories discussed that have important role in developing engaging online classes

Ally (2004) suggested that a combination of theories need to be considered to provide effective content delivery in the virtual environment.

The effectiveness of the learning community can be seen when all members share ideas and reflect on the process together. Online communities work best when members enter into relationships by getting to know each other, by participating in online discussions about the learning material, and by supporting one another’s learning and understanding (Wicks, 2009, p. 4).

Finally, to mention a cautionary note from Pace (1983), who advocated that our observations are often influenced by our previous knowledge and the theories that we believe in. Any exception that we notice makes us doubt our own experience rather than being dubious about long standing theories. This practice is treacherous as it often gives rise to stagnant knowledge base. While aligning practices to solid theories ensure

optimum utilizations of resources, we need to have scope and flexibility to welcome new practices and new ideas to help the field grow and flourish.

CHAPTER IV

STRATEGIES FOR VIRTUAL LEARNING ENVIRONMENT FOCUSING ON TEACHING PRESENCE AND TEACHING IMMEDIACY

Synopsis

Given the advancement in technology, online learning environment has evolved from less engaging modes of delivering course content to creating engaging and interesting learning experiences. The instructors play significant role in the design and successful delivery of virtual classes. It is therefore beneficial to examine the views and perspectives of researchers, who view online courses as essential in modern educational systems and have contributed useful strategies and ideas of creating engaging online classes. The focus of the literature review was to highlight teacher presence and teacher immediacy in online class settings. Both hard copy and online searches generated relevant articles depicting various online class engagement strategies. The learners' cognitive and affective learning experiences. The findings have implications for professional education in online teaching and learning environments, and for educators in general. Future research areas that should contribute to the progression of the field of online learning literature in terms of teacher presence and teacher immediacy are suggested in this chapter. The findings of the study suggest that teaching presence and teaching immediacy can influence students' motivation and learning.

Introduction

A survey report revealed that online student enrolment has increased drastically in past few years. “More than 6.7 million students were taking at least one online course during the fall 2011 term, an increase of 570,000 students compared to the previous year” (Allen & Seaman, 2014, p. 7). The survey also revealed that 32% of students are taking at least one online class and 77% of academic leaders rate online learning outcomes as equal or superior to that of a traditional class setting. These findings are a significant development in the academic environment. On line learning is growing at a faster rate than the overall enrollment in the higher education sector. As noted, “For the past eight years online enrollments have been growing substantially faster than overall higher education enrollments” (Allen & Seaman, 2014, p. 4). In a report entitled: *Grade Change: Tracking Online Education in the United States*, it is revealed that the number of students taking at least one online course increased by over 44,000 to a new 7.1 million (Allen & Seaman, 2014). Similar trends in growth are evident in organizational settings, where online training is becoming an integral part of the success strategy (Fagan, 2014):

[E-learning] is part of the biggest change in the way our species conducts training since the invention of the chalkboard or perhaps the alphabet. The development of computers and electronic communications has removed barriers of space and time. We can obtain and deliver knowledge anytime anywhere. (Horton, 2000, p. 6).

Online classes are consistently imparting and improving knowledge of learners separated by geographical distances. The limitless expansion beyond geographical boundaries attract a large pool of talent without incurring travel and physical expenses related to traditional face-to-face classes (Li & Irby, 2008). According to Palloff and Pratt (2007) the increase in the number of people using Internet is directly related to the greater demand of online classes. The increasing demand of technology well informed diverse learners separated by geographic distances is noticed by nonprofit and for profit organizations. As a result, institutions like National University, which is the second largest nonprofit institute in California, offers 60% of their courses online with most of their traditional classes including online components (Silverstone & Keeler, 2013).

Mgutshini (2012) summarizes this scenario related to online class environments:

Developments in computing, particularly with respect to the use of the Internet, have fueled an unprecedented growth in the use of technology-based environments within education. Notably, both distance-learning institutions, as well as conventional academic institutions have integrated a range of electronic learning environments, such as virtual discussion rooms, podcasts, virtual simulations and Twitter boards into their curricula. A number of reasons for these developments have been offered. Web-based strategies are seen as representing a revolutionary progression in learning through the flexibility of occurring anywhere, at any time and at a lesser cost than face to- face alternatives (p. 1).

Because the rapidly changing nature of technological innovation impacts the delivery of course content, the face of content delivery also changes (Calis, 2008; Chakraborty & Nafukho, 2014). Emerging technological innovations are creating scope to create interactive and flexible online learning environments. However, the shift from interactive and familiar, traditional classroom settings to virtual environments may be challenging to both the instructor and the learner. The challenges identified in the literature include: a) very limited supervision from the instructor (Mgutshini, 2012); b) inefficient use of technology (Bonk & Graham 2006); and c) lack of communication (Yang, Yeh & Wong, 2010).

Online classes offer the learners the unique opportunity to reflect and research before responding to issues being discussed in class, which is different in face-to-face classes, where learners have to respond to issues sometimes without much reflection and research. (Christie, Garrote & Jurado, 2009). With the increased use of computers, cell phones, the Internet, and other wireless devices, today's learners are more connected than ever before, yet disconnected at the same time especially from the interruptions created by mobile devise (La Roche & Flanigan, 2012). It becomes the responsibility of the course instructor to communicate with the disconnected or distracted students to increase their interaction with the course content and give them a sense of community. As La Roche and Flanigan (2012) pointed out, "The creation of a meaningful learning environment is the key to enhancing the educational experience. It is generally agreed that engaged students learn more and retain more of what they learn" (p. 47).

The Value for Learner Engagement in Virtual Learning Environments

Engagement, motivation and learning are important in both educational and organizational settings. Online classes and learning and teaching professional development require the formation of a positive environment, where learners are capable of creating inclusive learning experiences (Keller, 2008). In this chapter, as mentioned earlier, the term ‘organization’ is used in a broader context to include both for-profit and nonprofit institutions or companies.

Ally, (2004) proposed that in the global context, many multinational companies are delivering online training to their employees. Lip, Morrison and Kuprtitz (2014) proposed that “For private sector organizations, one of the most significant benefits of online instruction has been just-in-time delivery of training when employees need learning to effectively address performance problems in the workplace” (p. 28). Engaging learners in the virtual environment is identified as a challenge in organizations. Similarly, in higher education sector, the focus is to minimize the disadvantages associated with online learning and to enhance the positive effects.

The field of human resource development advocates for equipping learners with tools that promote and support their overall learning, growth and development (Nafukho, Amutabi, & Otunga, 2005, Nafukho, Wawire & Lam, 2011). The core components of human resource development, i.e. career development, training and development and organization development, focus on improving performance at both organizational and individual levels (Swanson & Holton, 2008). Therefore, performing a search for suitable teaching presence strategies and teaching immediacy will help improve learning and

performance at the individual level, and also will help organizations achieve a confident and skilled workforce.

Theoretical Framework

It is obvious that instructor's role in online class environment acts as significant factor for learners' successful and positive learning experiences. Teaching presence and teaching immediacy are found to be significant factors in traditional face-to-face class settings (Witt, Wheelless, & Allen, 2004). It is important to study the influences of these two important factors in online class environment (Baker, 2010). Tudorache, Iordache and Iordache (2012) portrayed electronic learning or e learning as "a type of education where the medium of instruction is computer technology. No in-person interaction may take place in some instances. E-learning is used interchangeably in a wide variety of contexts" (p. 389). La Roche and Flanigan (2012) defined student engagement as activities that involve students' 'active cognition processes' (p. 47). Hence, creating and delivering instruction and learning activities and assignments aimed at to involve learners in online class environment is required for student engagement in online class context. Teaching presence or instructor's presence is denoted by the role of instructors in online class environment. Designing and facilitating in a way to ensure cognitive and social learning experiences (Anderson, 2000). Again, teaching immediacy is defined in this study as instructor's availability perceived by the learners (Baker, 2010).

Although authors like Duderstadt (2012) are doubtful about possibilities of deriving universal strategies to engage online students, Cull, Read, and Kirk (2010)

optimistically found out the significance of deriving and following common strategies to engage students online.

The challenge of keeping our students engaged and motivated is common across grade levels, subject matter, and all types of institutions and courses. Online courses, however, present a special concern. With students and faculty in contact only via the internet several new challenges arise (para 1).

Grandzol and Grandzol (2006) noted that empirical evidence of best practices are the most effective in finding out strategies that help create engaging and interesting online courses. Again, Garrison, Cleveland-Innes and Fung (2010) advocated for theoretical foundation of online learning literature. “It is argued here that to advance our understanding of online learning in higher education, a coherent theoretical framework must guide investigations into the research and practice of web-based online teaching and learning” (p. 31).

Different studies highlighted the importance of forming a learning community among students. Researchers suggested that a sense of community is beneficial for the students’ emotional and cognitive development (Grandzol & Grandzol, 2006). Essential to the online education experience is what various researchers have termed ‘community of learners’, ‘knowledge-building communities’, ‘virtual learning communities’, or ‘communities of inquiry’. This concept urges course design such that students can contribute to the evolving knowledge base of the group, while developing underlying social networks within their course.

Studies found a significant relationship between students' sense of community and students' perceived learning (Arbaugh, 2014; Boston, 2014; Rovai, 2002; Thompson et al., 2005). Garrison suggested that teaching presence in online learning was an important factor that influenced learners' experiences. "The consensus is that teaching presence is a significant determinate of student satisfaction, perceived learning, and sense of community" (Garrison, 2007, p. 67). Researchers acknowledge that teaching presence is positively related to students' success, students' perceived learning and sense of community (Meyer, 2003; Swan et al., 2005; Vaughan, 2004).

In this chapter, online learning is defined as a medium where content is delivered via the Internet. The terms online learning, e learning, computer based learning, distance learning and virtual learning are used synonymously in this chapter. Rourke, Garrison and Archer (2001) defined teaching presence as "the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educational worthwhile learning outcomes" (p. 2). Teaching immediacy is denoted through the accessibility and availability of the instructor to the students.

Purpose and Research Questions

An extensive review of literature revealed that the recent trend in literature started to shift focus from solely finding whether online education is comparable to traditional face-to-face classes (Vroeginday, 2005). The recent work concentrates on delving out strategies to engage online learners. In many professional and educational organizations, online classes are made mandatory and as a result, learning is crucial for online users. The changing learning environment along with evolving sophisticated

technology necessitates following suitable strategies to engage today's learners in both educational and professional settings. The literature review was performed to assemble the strategies of teaching presence and teaching immediacy that are advocated in empirical studies performed in last 11 years. Perry and Edwards (2014) proposed that although the online literature increased in volume, "the literature remains lacking in terms of studies focused on what makes some online educators more effective than others" (p. 1).

The purpose of this literature review is twofold: First to present the existing research addressing teaching presence and teaching immediacy in online environments, and second to identify and explore the effect of teaching presence and immediacy on students' motivation and learning highlighted in the identified review of the literature. The literature review intends to address the following research questions:

1. What role does teaching presence play on online learners' perceptions regarding virtual learning environments?
2. What role does instructors' immediacy play on online learners' experience?

Methodology

Search Process

A systematic literature review (Ridley, 2012) was conducted to address the above- mentioned research questions. The literature search was carried out based on three overlapping domains: 1) teaching presence and/or teaching immediacy in online or virtual environment within educational setting. The following Figure 2 used Venn

diagram to depict the literature search process. The shaded area denotes the section of interest i.e. learners' optimal learning experiences.

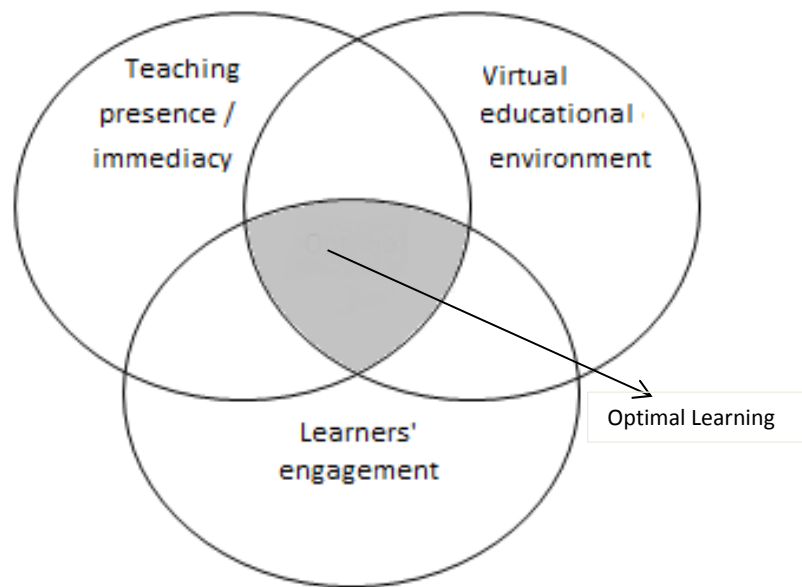


Figure 2. Literature Search Process and Area of Interests

Data Collection

To generate as many relevant publications as possible, the authors of this study reviewed hard copy journals and online search through various databases. The databases used included Academic Search Complete (Ebsco), Social Sciences Full Text (Wilson), ProQuest Education Journals, ProQuest Dissertation and Thesis, ProQuest Central, Social Sciences Citation Index (ISI), ERIC (Ebsco), SAGE Full Text Collection (CSA), Google Scholar, Emerald, and SAGE. The following keywords were used: Teaching presence, instructors' presence, teachers' immediacy, learners' affective learning,

cognitive learning, learner's motivation, online learning, virtual learning, elearning, distance education, online training, e-training, virtual training, online class engagement, students' satisfaction and learner engagement.

The keyword searches yielded the following journals: CyberPsychology and Behavior, Information and Communication Technologies in Tourism, Journal of Social Issues, Journal of European Industrial Training, Journal of Organizational Behavior, Personality and Individual Differences, Journal of Computer-Mediated Communication, Advances in Developing Human Resources, Business Horizon, AAOHN Journal, and Applied Psychology.

The initial search resulted 3563 articles. Considering the change in technology and as a result change in approach towards online courses, articles published within ten years (2003 to 2013) are included in the literature review. Applying the criteria, the search was narrowed to 50 articles. After reading the abstract, 30 articles are selected for this article. The following criteria are used to select articles for this study:

1. Articles that discuss teaching presence or teaching immediacy and related the concept(s) to students' motivation.
2. Articles published within 2003 to 2014. Nevertheless, older publications are included for concept building and to support or refute arguments presented in this chapter
3. Empirical studies that identified teaching presence and teaching immediacy as online instructional strategies.
4. Published in peer-reviewed journals

In this chapter, teaching presence, instructor presence and teaching immediacy/ teachers' immediacy are used to convey the same notion.

Data Management

The authors relied on Garrard's review matrix to conduct an extensive review of the relevant literature. The column heads are 'authors and year', 'purpose', 'participants', 'research methodology', and 'major findings'. The major findings section includes information about related theories and notes, positive points and gaps identified. Quotes from the articles were used whenever possible to avoid distortion of information. The tables help organize information from various relevant research articles highlighting purposes and significance of the selected articles. The initial search resulted 1650 articles. After going through the abstract and applying the stated criteria to the abstract, a total of 25 articles were included in this literature review. A sample of the literature matrix is presented in Appendix A.

Findings and Discussions

Instructor's Presence

In face-to-face classes instructors can interact with students and receive verbal and nonverbal cues to understand learners' level of engagement. In online classes learners often look for the similar type of 'virtual visibility' of their instructors or facilitators (Cull, 2010).

Timely feedback enhances the student/Instructor relationship and contributes to a healthy classroom dynamic. The online student has an expectation of immediate

feedback for any and all concerns. They may feel isolated; therefore the Instructor has to manage the online environment differently than a face-to-face classroom (Silverstone & Keeler, 2013, p. 19)

Anderson (2008) identified ways to denote teaching presence in online class environments. Paying attention to “creating or repurposing” (p. 347) contents like lecture notes, adding teachers’ comments, posting video lectures, including personalized inputs etc. can ensure a personal touch from the teacher and enables students to actually relate to the teacher or the instructor. Anderson also tied this practice to student motivation:

This design category of teaching presence also includes the processes through which the instructor negotiates timelines for group activities and student project work, a critical coordinating and motivating function of formal online course design and development, and a primary means of setting and maintaining teaching presence (p. 348).

Garrison (2007) posed that teaching presence played a significant role in creating an online learning community. The author noted, “teaching presence must consider the dual role of both moderating and shaping the direction of the discourse. Both are essential for a successful community of inquiry” (p. 32). Garrison cautioned that instructors need to understand when they need to facilitate or direct online discussions, as they both are essential to use effectively in order to create a learning-focused online community. Various authors including Baker (2010), Garrison and Arbaugh, (2007), and Juwah (2006) viewed teacher’s function as managerial, social, organizational or technical depending on the role they are playing in their classroom.

The relation between teaching presence and students' perceived learning is established in literature (Chesney & Marcangelo, 2010; Lori, 2013; Shea, Pickett & Pelz, 2004). Wu and Hiltz (2004) conducted a study where students asserted that interactions with the instructor help them engage in learning-oriented online discussions. Garrison (2005) stated that teaching presence is crucial to enhance critical thinking in students. The leadership role of instructors is often crucial in deciding cognitive content quality in the class activities. As Garrison noted "...we find the leadership role of the instructor to be powerful in triggering discussion and facilitating high levels of thinking and knowledge construction" (p. 137).

Instructor's Immediacy

Anderson (1979, cited in 2008) first recognized that immediacy of a teacher affects students' affective learning and therefore, students' achievement. Anderson, however, did not find any relation between instructor's immediacy and cognitive learning. Recent research highlighted a positive relationship between students' cognitive learning and teachers' presence (Baker, 2010; Witt, Wheeler & Allen, 2004).

Vonderwell (2003) pointed out that pattern of feedback given to the learners during one academic semester: in the beginning of the semester, usually it is very regular. Then as the semester progress, the amount of feedback and their timeliness decreases. Timely and constructive feedback can play significant role in ensuring learners' engagement.

Baker (2010) advocated for the relationship between instructor's immediacy and learner's cognitive and affective learning. It was established that verbally explicit

immediate feedback influenced learners' self-perceived cognitive and affective learning and therefore, increased engagement in online class environment. The trend of offering online classes compels us to explore strategies to engage learners in online class environment. The literature review focuses on the following variables: instructor's presence and instructor's immediacy in increasing learners' cognition, motivation and affective learning.

Student engagement in online learning has been described as an 'expanding industry' (Becker & Posner, 2012; Kim & Hoop, 2013; Rowe & Asbell-Clarke, 2007). The flexibility available in online classes is one of the reasons for its increasing popularity in both educational and professional settings. Online interactions are recognized and welcomed in literature. Garrison et al. (2005) emphasized the importance of interactions in educational setting. These interactions can be enhanced through the use of innovative and appropriate technology.

Interaction is seen as central to an educational experience and is a primary focus in the study of online learning. The focus on interaction in online learning emerges from the potential and properties of new technologies to support sustained educational communication (p. 134)

It is the responsibility of the online class provider to offer interesting and engaging learning environments where the learners not only learn the content, but also have a positive and safe experience. "The proliferation of offerings and options in online education programs exacerbates the need for research into the nature and effectiveness of teaching and learning in such environments" (Kim & Hoop, 2013, p. 79). The online

interaction is describes as sine qua non in online class environment, however, interactions alone cannot guarantee cognitive development and content learning quality in online class environment (Garrison, 2005).

Anderson (2008) proposed that instructors play a crucial role in facilitating online discussions to welcome new perspectives and critical thinking that are related to the actual content of the course. Researchers (e.g. Cheng., Paré, Collimore & Joordens, 2011; Hew and Cheung Levin 2011; Ioannou, Demetriou & Mama (2014) proposed guidelines to make online discussions engaging in order to create online environment suitable to cause positive learning endeavor for the learners. The guidelines are presented in Table 4.

Table 4. Online Discussion Facilitation Guideline

Strategies	Application
The discussion goes on for at least a week	The learners will get time to reflect on the content shared in the posts
The syllabus shows ground rules to follow in discussions	Learners understand the expectations
Ask students related questions to stimulate discussions	The questions asked by the instructors will help students be engaged
The instructor adds positive comments to the students	Encourages learners to get engaged in the discussion
Encourage learners to relate their own experiences	The learners can learn from their experiences and also will also play

Table 4. Continued

Strategies	Application
The discussion goes on for at least a week	The learners will get time to reflect on the content shared in the posts attention to the discussions if they know that the experiences are used later.
Ask learners to post at least two responses to peers: Hence encourage contribution	Ensures peer learning and contributes to social learning
Ask learners to relate discussion posts with text, videos, lecture, slides and other resources provided	Encourages learners to utilize the course resources
Ask learners to summarize their discussion threads	Provides learners to reflect on their and others' comments

Kam and Hoop (2013) proposed that “learners can share data from their experiments, discuss the common pattern in their results, question discrepant data, challenge misconceptions, and form evidence-based conclusions” (p. 80). An online class should provide the learners the opportunity to discuss, question, criticize and challenge in order to achieve learners’ cognition, motivation and affective learning.

McCroskey (2006) suggested that instructor’s communication can have significant impact on learners’ affective learning. Instructors can play role in directing class discussions in the right direction. Their positive and constructive feedback in

timely manner can reduce learners' anxiety and concerns. If practiced effectively, the asynchronous class discussion can produce more affective learning as compared to that of synchronous discussions (Cleveland- Innes & Ally 2007). Moore and Kearsley (1996) proposed transactional theory where the authors emphasized the transactional distance between learners and instructors. Classes with only lectures and no communication contain large transactional distance. While, classes that indulge interactions are perceived to have low transactional distance.

Bloom (1956) asserted the importance of instructor's emotional responses to influence learning. The lower level (knowledge, comprehension and application) and higher level (analyze, synthesize and evaluate) of thinking are achieved through careful and planned facilitation. Burill (2011) advocated that providing meaning to learning is the effective way of practicing Bloom's Taxonomy in increasing students' motivation and learning. Baker (2010) and Russo and Benson, (2005) proposed positive relation between instructor's presence and affective learning of the students. Some studies (Baker, 2010; Ni, 2004) evidenced positive relationship between instructor's immediacy and learners' affective learning.

Miltiadou and Savenye (2003) proposed that motivation plays significant role in deciding whether a student will succeed in a class environment. Therefore, the instructors need to pay attention on students' motivation. Researchers Palloff & Pratt (2003) suggested that motivation plays a vital role in online class environment as it depends on learners' self-directed learning pace.

Role of Instructors in Online Class Environment

Caudle (2013) proposed that “teaching presence is more involved than designing and facilitating a community; it also includes caring for the affective domain and mediating interactions” (p. 119). Based on the information received from the available literature, the following unique roles of instructors are highlighted:

Course Facilitator

According to Silverstone and Keeler (2013), clear instructions in facilitation increase learner and instructor interactions. Instructor’s presence and immediacy in providing feedback are also capable of creating learner and instructor interactions. In a study conducted by Silverstone and Keeler (2013) the concept of "Emergency help line" was introduced. The students were given email address that was solely created to address students’ concerns.

Subject Matter Expert

Silverstone and Keeler (2013) proposed that in online classes instructors can attempt to encourage creating information repository and sharing information: “when managed effectively, discussion forums can encourage learners to share information, build on the ideas of others, and construct understanding about the changing world of technology” (Silverstone & Keeler, 2013, p. 18). Being at ease with the technology being used help increase interactions with the actual content for the learners. According to Cottrell and Donaldson (2013) accessibility to resources increases the interactions between learners and content.

Manager

Students learn in different ways and therefore, online class environments should consist of various measures like, lectures, videos, handouts, graphics, and activities to satisfy learners with different learning style (Silverstone and Keeler, 2013). Kim and Hoop (2013) advocated the importance of social interactions and learning by thinking and doing. Learners' previous experiences can facilitate their learning.

Course Designer

Nagel and Kotzé (2010) coined the importance of using technology effectively to achieve learners' engagement in online class environment. Nevertheless, technology should not become the sole focus of the class. In the context of nurse education, Cottrell and Donaldson (2013) advocated that technology in many cases, acts as a medium to deliver content to the learners. It does not aid not the content itself. "The concept of teaching and learning is driven by the pedagogical principles of teaching and learning rather than technology itself, which captures the principles of effective e-learning" (Cottrell and Donaldson, 2013, p. 221). Hence, learners should be provided with clear instructions and navigation guides to get them acquainted with the learning management system that is used to deliver the course.

Offir, Barth and Shteinbok, (2003) included the following roles for instructors: social (positive environment through interactions), procedural (addressing administrative and technical issues related to the lesson or course), expository (providing resources), explanatory (answering questions), cognitive task engagement (enabling learners to process content), and learning assistance interactions (ensuring retention) (p. 71). In their

attempt to measure presence in online environments, Witmer, and Singer (1998) included two set of factors: Control factors (indicating authority) and sensory factors (indicating support). The control factors include degrees of control, anticipation of events, mode of control, physical environment modifiability and last but not least, immediacy of control (p. 229). Data in Table 5 reveals the various roles instructors are expected to play in online class environments as demonstrated in various research studies. The table also presents the specific responsibilities associated with the roles.

Table 5. Role of Instructors in Online Class Environments

Role Of Instructor In Relation To	Responsibilities
Teaching Presence And Teaching Immediacy	
Mentor	Understanding learners' personal learning goals Helping them achieve their goals
Facilitator	Encouraging learners to be involved in the class and owning learning content Encouraging learners to be involved
Designer and Developer	Designing courses to meet the learning styles of learners (visual, auditory and kinesthetic) Organizing course content and

Table 5. Continued

Role Of Instructor In Relation To	Responsibilities
Teaching Presence And Teaching Immediacy	
Manager or supervisor	<p>information in a user-friendly way</p> <p>Resolving conflicts among learners</p> <p>Ensuring a safe environment for the learners to share their experiences and views</p>
Technical Assistant	<p>Answering technical questions regarding class sites</p> <p>Troubleshooting technical hitches to ensure smooth access to learners</p>
Model or Ideal figure	<p>Modeling ideal online class etiquette</p> <p>Presenting ideal class behavior by creating examples</p>
Devil's Advocate	<p>Questioning to spark critical thinking</p> <p>Ensuring learning reflection through assignments and class activities</p>
Counselor	<p>Helping learners overcome any learning related difficulty (i.e. isolation)</p> <p>Discussing with learners to understand</p>

Table 5. Continued

Role Of Instructor In Relation To	Responsibilities
Teaching Presence And Teaching Immediacy	
Explorer	<p>learning outcomes</p> <p>Trying new ideas and tools in online classes in terms of assignments and activities</p> <p>Using innovative techniques to ensure learners engagement (keeping track of recent research and findings)</p>
Moderator	<p>Acting as the negotiator in group conflicts</p> <p>Acting as a representative of learning; perspectives present outside the class environment</p>
Researcher	<p>Performing searches to get acquainted with the new development in online class research areas</p> <p>Adding new aspects to online classes for effective delivery of content</p>
Administrator	<p>Indicating class rules and expectations</p>

Table 5. Continued

Role Of Instructor In Relation To	Responsibilities
Teaching Presence And Teaching Immediacy	
Repository	<p>Ensuring learners follow class etiquette</p> <p>Acting as resources to learners in answering their queries</p> <p>Providing learners with links and instructions regarding available resources</p>

Conclusions and Future Research Area

The paper attempted to explore the role of teaching presence and teaching immediacy in online learners' motivation and learning. To achieve the purpose, relevant articles were reviewed. Anderson et al. (2001) argued that teaching presence can be achieved through facilitators allotted i.e. it can be evenly distributed with students, who can play facilitator's role in leading specific discussions or assignments. Anderson (2008) further argued that online discussions and discourse provided the learners with the opportunity to engage in critical reflection and set up a platform where students can freely express their views even when they disagree with the instructors. Prensky (2000)

preferred to call the process as power of reasoning. As Anderson correctly noted when talking about involving students in discourse:

In fulfilling this component of teaching presence, the teacher regularly reads and responds to student contributions and concerns, and constantly searches for ways to support understanding in the individual student, and the development of the learning community as a whole. (p. 351)

This paper has limitations. Each limitation, however, opens opportunities for future research areas. The paper looked at the previous studies and proposed connections between teaching presence and students' learning, and teaching immediacy and learners' motivation and cognition. Quantitative and qualitative studies are needed to confirm the findings in this paper. What was not examined in the review of literature are some important variables related to the learner characteristics such as age, gender, ethnic background, and social economic status.

The paper contributes towards proposing strategies for online class environment, where the instructors and learners are capable of gaining positive learning experiences. The strategies can be beneficial in both educational and professional settings. The field of human resource development contains training and development as one of the core components to ensure development at both individual and organizational levels (Werner & DeSimone 2011). The findings of this paper act towards strengthening the relation between instructors and learners to ensure optimal learning experiences in virtual class rooms.

CHAPTER V

EMPIRICAL STUDY HIGHLIGHTING THE EFFECT OF TEACHING PRESENCE AND TEACHING IMMEDIACY ON STUDENTS' MOTIVATION, AFFECTIVE LEARNING AND COGNITIVE LEARNING

Synopsis

The popular notion of picturing a classroom as the professor entering the classroom and lecturing is changing in today's world. Online classes offer the unique opportunity to revise and repeat the class content at the students' own pace and therefore, learner content interaction increases. This opportunity is usually not available in traditional face-to-face setting (Christie, Garrote & Jurado, 2009). With the increased use of computers, cell phone, other wireless devices and the Internet, today's learners are connected than ever and disconnected at the same time (La Roche & Flanigan, 2012). It becomes the responsibility of the course provider to communicate with the disconnected students to increase their interaction with the course content and give them a sense of belonging and being part of the learning community. Asking questions, interacting with co-learners and professors are not the only way to interact in classrooms any more. The purpose of the study was to identify the effect of teaching presence and immediacy on students' motivation, affective learning and cognitive learning in online courses.

Introduction

Because of the rapidly changing nature of the technological innovation impacting delivery of the course content, the face of content delivery is changing (Calis, 2008;

Chakraborty & Nafukho, 2014). The recent technological innovations are creating scope to create interactive and flexible online learning environment. However, a shift from interactive and familiar environment of traditional class setting to the virtual world seems challenging to both the facilitator and the learner. The challenges identified include: very limited supervision from the instructor (Mgutshini, 2012), inefficient use of technology (Bonk & Graham 2006), and lack of communication (Yang, Yeh & Wong, 2010).

Online classes offer the unique opportunity to revise and repeat the class content at the students' own pace and therefore, learner content interaction increases. This opportunity is usually not available in traditional face-to-face setting (Christie, Garrote & Jurado, 2009). With the increased use of computers, cell phone, other wireless devices and the Internet, today's learners are connected than ever and disconnected at the same time (La Roche & Flanigan, 2012). It becomes the responsibility of the course provider to communicate with the disconnected students to increase their interaction with the course content and give them a sense of community. As La Roche and Flanigan (2012) pointed out, "The creation of a meaningful learning environment is the key to enhancing the educational experience. It is generally agreed that engaged students learn more and retain more of what they learn" (p. 47).

Teaching presence and teaching immediacy are found to be significant factors in traditional face to face class settings (Witt, Wheelless, & Allen, 2004). It is important to study the influences of these two factors in online class environment (Baker, 2010), hence, the significance of this study. Tudorache, Iordache and Iordache (2012)

portrayed electronic learning or e-learning as “a type of education where the medium of instruction is computer technology. No in-person interaction may take place in some instances. E-learning is used interchangeably in a wide variety of contexts” (p. 389). La Roche and Flanigan (2012) defined student engagement as activities that involve students’ ‘active cognition processes’ (p. 47). Hence, creating and delivering instruction and learning activities and assignments aimed at involving learners in online class environment is required for student engagement in online class context. Teaching presence or instructor’s presence is denoted by the role of instructors in online class environment. Designing and facilitating in a way to ensure cognitive and social learning experiences (Anderson, 2000). Again, teaching immediacy is defined in this study as instructor’s availability perceived by the learners (Baker, 2010). It is obvious that instructor’s role in online class environment acts as a significant factor for learners’ successful and positive learning experiences.

Although authors like Duderstad (2012) are doubtful about possibilities of deriving universal strategies to engage online students, Cull, Read, and Kirk (2010) optimistically found out the significance of deriving and following common strategies to engage students online.

The challenge of keeping our students engaged and motivated is common across grade levels, subject matter, and all types of institutions and courses. Online courses, however, present a special concern. With students and faculty in contact only via the internet several new challenges arise (para 1).

Grandzol and Grandzol (2006) observed that empirical evidence of best practices are the most effective in finding out strategies that help create engaging and interesting online courses. Garrison, Cleveland-Innes and Fung (2010) advocated for theoretical foundation of online learning literature. “It is argued here that to advance our understanding of online learning in higher education, a coherent theoretical framework must guide investigations into the research and practice of web-based online teaching and learning” (p. 31).

Background and Problem Statement

As noted in the synopsis of this chapter, the popular notion of picturing classroom as the professor entering the classroom and lecturing is changing in today’s world. Asking questions, interacting with co-learners and professors are not the only way to interact in classrooms any more. Bibeau (2001) proposed that teaching and learning are ‘social endeavor’ (p. 57). On a similar tone, Garrison (1996) advocated that social presence in classroom in some cases is indispensable to achieve cognitive learning. Researchers (e.g. Anderson, 2001; Chen, 2007 & Nafukho, 2007) indicated the significant role a teacher can play in creating active learning environment for learners in virtual environment.

Instructor’s interaction, communication and facilitation in the class play significant role in building learning community to promote collaborative learning. Hence, teaching presence can have a role in online learning. Authors like Kearney et al., Plax, and Wendt-Wasco (1985), Gorham (1988), and Christophel (1990) explored the concept of social presence in the classroom and the related with “teacher immediacy”.

Behaviors that create immediacy include both verbal and nonverbal actions such as gesturing, smiling, using humor and vocal variety, personalizing examples, addressing students by name, questioning, praising, initiating discussion, encouraging feedback, and avoiding tense body positions (Anderson et al., 2001, p. 52).

Gunawardena and Zittle also proposed that immediacy or non-immediacy can be conveyed verbally and non-verbally. Non-verbally through dressing style, physical proximity etc. and verbally through proper use of words and pause. The use of video conferencing, lectures etc. can be used to involve verbal teaching presence in online classroom.

The role of teacher initiates with the designing of the class, including content, deciding on assignments and activities, continues with delivering the content through electronic media, addressing learners' queries and concerns, and achieves success by providing positive learning experiences to the learners. "For e-learning courses to fully engage students, the teacher as a content expert and course designer should seek to create active learning environments..." (Nafukho, 2007, p. 27).

Some researchers argue that achieving intensive interaction that is available in face to face setting is difficult to achieve in virtual classroom. Kamin (2006) pointed out that "keeping students engaged in a virtual environment requires a sustained instructor presence" (Kamin, 2006 p. 426). Teaching immediacy on the other hand focuses on reducing psychological or physical distance between the student and the instructor. Teaching immediacy is an important factor to enhance positive distance education

experiences (Gandhi, Samraji & Watt, 2016). Ghamdi, Samarji, and Watt (2016) suggested that more research needed to explore the aspects of teaching immediacy in academic environment.

Problem Statement

In computer mediated learning, the virtual classroom provides as a learning platform to interact, to share experiences and knowledge, and to actively involve students in learning activities. The nature of interaction is different and hence, needs special attention. “In the online environment, technology mediates learning: it mediates communications and information transfer between the student and the” (Jones, 2011, p. 68). The role of the teacher as course a designer and course facilitator can play a significant role in addressing learner engagement issues and create an active positive learning environment.

Studies found significant relationship between students’ sense of community and students’ perceived learning (Rovai, 2002; Thompson et al., 2005). “The consensus is that teaching presence is a significant determinant of student satisfaction, perceived learning, and sense of community” (Garrison, 2007, p. 67). Researchers acknowledge that teaching presence and teaching immediacy are positively related to students’ success, students’ perceived affective learning, cognitive learning, motivation and sense of community (Meyer, 2003; Vaughan, 2004; Swan et al., 2005; Richardson et. al, 2015; Zhoe & Sullivan, 2016;). Previous studies identified the need for the empirical studies addressing the relationship among the above mentioned variables (i.e. teaching presence, teaching immediacy, motivation, affective learning and cognitive learning). The dearth

of empirical evidence in exploring the roles and interrelations of factors like teaching presence and teaching immediacy influencing learners' experiences and learning engagement justifies the need for this study. Gandhi, Samraji and Watt (2016) indicated a research gap that needs to be addressed by considering and exploring the effect of teaching immediacy in online class environment. Baker (2009) stated the importance of studies that addresses teaching presence and teaching immediacy in virtual class environment. Ghamdi, Samarji, and Watt (2016) emphasized "further research is needed to investigate the potential impact of the salience of both the instructor and the fellow students on student's participation, satisfaction, and acquisition of the essential and desired course capabilities" (p. 18).

Purpose of the Study

The purpose of the study was to identify the effect of teaching presence and immediacy on students' motivation, affective learning and cognitive learning. The study set out to address the following research questions and hypothesis:

Research Questions

1. Does increased teaching immediacy lead to improved students' cognitive learning, affective learning and motivation to learn?
2. Does increased teaching presence lead to improved students' cognitive learning, affective learning and motivation to learn?

Research Hypotheses

The hypotheses formulated for the study include the following:

Ho1: There was no statistically significant correlation between perceived teaching immediacy and perceived teaching presence in online classes.

Ho2: There was no statistically significant difference between teaching immediacy and teaching presence and learners' affective learning in online classes.

Ho3: There was no statistically significant difference between teaching immediacy and teaching presence and learners' cognitive learning in online classes.

Ho4: There was no statistically significant difference between instructor immediacy and teaching presence and student motivation in online classes.

Theoretical Paradigm

Crotty (1998) proposed four factors in designing methodological framework. (1)

Epistemology: Theory of knowledge: e.g. objectivism or subjectivism etc. (2)

Theoretical perspective e.g. positivism, post-positivism, interpretivist or critical theory.

(3) Methodology: strategies, e.g. experimental research, survey research, narrative approach etc. (4) Method: research techniques, i.e. questionnaire, interviews etc.

Following the above mentioned structure, the research design section will focus on the stated four factors.

Considering the existing research in the related field, it is found out that constructivist learning theory possess important role in guiding teacher presence and teaching immediacy strategies (Ally, 2004, Nafukho, 2005, Wang, 2011). As Nafukho (2007) suggested, “the constructivism school of thought argues that teaching is more

efficient when students engage in activities within a supportive learning environment and when they get proper guidance mediated by learning tools” (p. 25). The present research is focused on constructivist learning theory principles and assumptions:

Learning is perceived as an active process, learners’ generalized goal is to constructing knowledge, instructor’s responsibility is to help learners achieve their learning goals, and learning environment should promote interactive learning strategies.

Constructivist learning theory is considered to be the way that expresses the process of learning through knowledge creation. “Constructivism is a philosophical view on how we come to understand or know. It is, in our mind, most closely attuned to the pragmatic philosophy” (Savery & Duffy, 1995, p. 89). Constructivist learning theory portrays learners to have active role in the learning process. This theory finds learners experiences to hold significant part in shaping learners’ body of knowledge.

Research supports use of constructivist learning theory in online learning (Ally, 2004). Research studies (Ally, 2004; Chen, 2007) proposed the importance of practicing constructivist learning theory in online environment. Instructor’s guidance in the right direction helps practice constructivist learning theory in educational context (Harasim, 2012). Constructivist learning constructs proposes practicing self-regulated learning and self-paced learning (Nafukho, 2007).

Significance of the Study

Engagement, motivation and learning are important in both educational and organizational settings. Online classes and e-learning training require forming a positive environment, where learners are capable of creating inclusive learning experiences

(Keller, 2008). The significance of this study, herein, lies in its purpose that is to identify the effect of teaching presence and immediacy on students' motivation, effective learning and cognitive learning. In this study, as mentioned earlier, the term 'organization' is used in a broader context to include both profit and nonprofit institutions or companies. Hence, employers, employees, trainees, trainers, teachers, professors and students are expected to be benefited from the findings of this study.

Secondly, the findings from this study will contribute towards reducing the challenges associated with online learning. Ally, (2004) proposed that in the global context, many multinational companies are delivering trainings to their employees online. Lip, Morrison and Kuprtitz (2014) proposed that "For private sector organizations, one of the most significant benefits of online instruction has been just-in-time delivery of training when employees need learning to effectively address performance problems in the workplace" (p. 28). Engaging learners in the virtual environment is identified as a challenge in organizations. Similarly, in higher education sector, the main focus is to minimize the disadvantages associated with online learning to enhance the positive effects.

Third, the study identified some future research areas along with contributing towards addressing the research gap in the current literature of online education. The field of human resource development advocates for equipping learners with tools that cause their overall development (Nafukho, Amutabi, & Otunga, 2005). The core components of human resource development, i.e. career development, training and development and organization development, are focused towards improving

performance at both organizational and individual levels (Swanson & Holton, 2008). Therefore, performing a search for suitable strategies of teaching presence and teaching immediacy can help improve learning and performance at the individual level, and also will help the organizations to achieve confident and skilled workforce.

Assumptions

The following assumptions were taken into account during data collection, and analysis phases:

- (a) All the participants would be interested to take part in the data collection process and provided their honest reflections without any biases or prejudice.
- (b) The participants would report their actual self-assessments and self-perceptions i.e. participants' self-assessments and self-perceptions better reflects their perception.
- (c) The participants were taking or had taken online and face to face classes to compare the learning strategies associated with both learning methods.

Delimitations of the Study

The following delimitations were kept in mind while performing the research:

Specific Geographic Location

The data was collected from participants, who were taking or had taken online classes in southwest United States University. In the process, the researcher found it difficult to consider the specific geographic location of the participants. Only two criteria used: on campus and away from campus.

Course Subjects

The researcher could not categorize or classify the courses based on subjects. The participants are from a wide variety of online classes in different departments. Hence differences in perceptions related to variety of course characteristics.

Learner Specification

Among the courses, the specifications of the learners and courses were determined. The learners' style satisfaction level, course difference etc. were not considered during the data collection and data analysis process.

Limitations of the Study

The study did not include data from corporate workplaces, as participants are from educational settings, who are taking online classes in a university. Although the study participants included full time or part time corporate workers, no question was included to differentiate or highlight this aspect. Therefore, the study cannot be generalized beyond the academic sector.

There is a void of research that needs address the role of teaching immediacy and presence in online learner engagement (Baker, 2010). The dearth of literature in organizational setting lead to including studies performed in educational setting. Hence, the literature review includes mostly articles related to educational setting. The transferability of data collected in educational sector to the organizational sphere is questionable. Therefore, the data collected in this way is limited to the context.

The survey that was used in this study relied on self-reported responses from the participants. The self-perception is the limitation of this study due to following reasons: (a) it may not reflect actual learning and performance. (b) common method variance as a result of self-reported data may have inflated some of the relationships between the variables. The researcher will conduct the Harman's single factor test following the instructions of Podsakoff and Organ (1986) to ensure that there is no serious problem with the data.

Operational Definitions of Key Terms

This section lists the definition of the key terms used in this study.

Virtual Learning / Electronic Learning / Online Learning / Distance Learning

The terms e learning, virtual learning, online learning and computer based learning are used synonymously in this study. Tudorache, Iordache and Iordache (2012) portrayed electronic learning or e learning as "a type of education where the medium of instruction is computer technology. No in-person interaction may take place in some instances (p. 4).

Teaching Presence

The term teaching presence is used in this study to refer to instructors' facilitation and direction to produce positive outcomes. Teaching presence is the "the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educational worthwhile learning outcomes" (Anderson, Rourke, Garrison & Archer, 2001, p. 2). Teacher presence, teaching

presence, facilitators' presence and instructor presence are used synonymously in this study. Gunawardena and Zittle (1997) proposed that social presence is associated with teacher presence and teaching intimacy.

Teaching Immediacy

The term teaching immediacy or instructor immediacy is indicated in this study as the promptness and availability of instructors in online environment. Nonverbal factors like smiling, eye contact, posture, gesture and physical distance indicate teaching presence (Gunawardena and Zittle, 1997). The authors defined teacher immediacy as a “measure of the psychological distance that a communicator puts between himself or herself and the object of his/her communication” (Gunawardena & Zittle, 1997, p. 9). Again, Kearney et al. (1999) defined teacher immediacy as “behaviors which increase or produce interpersonal closeness, sensory stimulation, and signal warmth and friendliness” (p. 62).

Affective Learning

The term affective learning in this study is referred to as the students' attitude towards the content. According to Kearney et al. (1996) the affective domain of learning “refers to students' attitudes, beliefs, and values toward the subject matter and learning experience” (p. 63). Affective learning produces positive attitude towards the content that helps achieve lower level and even higher level of learning of Bloom's (1956) taxonomy.

Cognitive Learning

Learners' cognition in this study is referred to as the mental ability to think, understand, critically examine, relate and apply knowledge in different contexts.

Learners' Motivation

Learners' Motivation in this study is referred to as the force that is capable of directing learners' behavior. Motivation is divided into two categories intrinsic (internal desire or urge driven) and extrinsic (driven by reward in the forms of positive feedback, good grade and/or punishment) motivation. Miltiadou and Savenye (2003) advocated that in online environment learning is influenced to a huge extent by learners' motivation.

Methodology

Research Design

The research methodology adopted in this study was a cross sectional online questionnaire design. Quantitative survey design was utilized for this study. The online self-perception survey was distributed to the accessible sample. "Online Class Questionnaire" survey (Appendix 2) was chosen as an instrument for this study. Anderson and Kanuka (1997) noted that self-reported perception is the most common way to collect participations' views. Corrallo (1994) also affirmed that self-reported cognitive learning results strongly indicate results gained through assessment tools. As explained in the previous section, constructivist learning theory supports that learning is a personal experience. The individual experiences are best captured through self-

reported perceptions. The instrument was previously used by Baker (2001). Permission to use the survey instrument was achieved from Dr. Credence Baker of Tarleton State University (Appendix 1 shows the permission received).

Target Population

The college students, who had taken or who were taking online classes at the time of this study in a top research university in southwest United States were considered as the target population of this study. “Since it is usually not possible to reach all the members of a target population, one must identify that portion of the population which is accessible. The nature of the accessible population depends on the time and resources of the researcher” (Yount, 2006, p. 7-3).

Accessible Population

The graduate students, taking (or had taken) online classes, at a tier one University in Southwest United States whose e-mail addresses were available to the researcher formed the accessible population for this study. E-mail addresses for the students were obtained from the institution. Table 6 indicates the number of students enrolled in distance learning program in the College of the institution that was involved in this study.

Table 6. The Approximate Number of Target Participants

Department	Headcount	Respondents (N)	Percentage of Total
A	163	110	36%
B	139	50	18%
C	49	27	9%
D	160	113	37%
Total	511	300	59%

Seven hundred and eleven students, in the distance learning program, served as accessible population. The following criteria guided participant selection:

- Graduate students in the 'Education' Program.
- Participants should have taken or are taking online classes (not blended classes or flip format classes but classes where content is offered online).
- The survey was constructed and designed in English. Hence, participants needed to be proficient in English language in order to understand and participate in this study.

Instrumentation

The instrument focuses on five variables namely, teaching presence, teaching immediacy, learners' motivation, cognitive learning, and affective learning. The instrument consists of questions from five instruments.

The Verbal Immediacy Scale

Gorham's (1988) Verbal Immediacy Scale is used in literature to measure instructors' immediacy in virtual environment. It focuses on teaching presence. The α ranges from .84 to .90 and uses Likert scale with 17 items (Christensen & Menzel, 1998; Christophel, 1990; Gorham, 1988; Moore & Kearsley, 1996).

Teaching Presence Scale

Shea's (2006) Teaching Presence Scale is a 7 point Likert Type Scale with distinct three sub constructs: Design and/or Organization, Facilitation and Instruction. This focuses on teaching presence. The reported α of this scale are: .90, .94 and .89 (Arbaugh and Hwang, 2006).

Six-Scale Measure of Affective Learning

The six-scale measure of affective learning was first created by McCroskey et al (1985). This focuses on affective learning. Existing research shows that the reliability of the instrument is .82 to .98 (Baker, 2001; Christensen & Menzel, 1998; Christophel, 1990; McCroskey et al., 1996; Teven & McCroskey, 1996)

Learning Loss Scale to Measure Cognitive Learning

Learning Loss Scale developed by Richmond et al. (1987) is used to measure perceived cognition of the participants. This focuses on learners' cognitive learning. The instrument is used in studies (e.g., Baker, 2001; Christensen & Menzel, 1998; Christophel, 1990; Frymier, 1994; Rodriguez et al., 1996; Sanders & Wiseman, 1990) with an alpha of 0.85.

Motivation Scale

The seven-point scale and Participants' motivation is measured with Motivation scale, which is developed by Christophel, 1990. Motivation scale focuses on learners' motivation. The scale is used in studies and resulted an alpha of .95 (McCroskey, Richmond, and Bennett 2006).

Validity of the Instrument

Validity is related to the accuracy of an instrument, i.e. the instrument is capable of measuring what it intends to measure (Moskal & Leydens, 2000). Considering validity is important in research to ensure that the instrument minimizes the error rates. The following types of validity measures are important in research: face validity, criterion related validity, construct validity, and sampling validity (Phelan & Wren, 2006).

Face Validity

In this type of validity, the stakeholders provide their valuable judgment on the accuracy of an instrument. Although, this method is criticized for not being considered

as a scientific method (Phelan & Wren, 2006), it is an excellent way to achieve the stakeholders' buy-ins and also incorporates various views.

Criterion Related Validity

In this type of validity measure, the researcher compares the correlation of the test results with criterion of interest available in existing studies. The higher correlation with standardized test scores indicates higher validity of the instrument.

Sampling Validity

This is often referred to as content validity. This indicates that the constructs cover broad range of subjects related to the study. Samples need to include all the possible and available domains. A panel of experts' opinion can be included to understand the various ranges to be included in the study. The instrument, used in this study, is previously used in research works published in peer reviewed journals. I asked and received permission from Baker (2008) to use the instrument.

Reliability of the Instrument

Reliability is referred to as the consistency of the instrument to measure what it purports to measure (Huck, 2004). A reliable instrument repeats same results over and over again. The instrument needs to be consistent not only within itself but also across time. Cronbach's alpha is the commonly used measurement for reliability. A reliability alpha of .60 is viewed as an acceptable cut-off in the educational studies (Gronlund, 1981). Table 7 indicates the Cronbach's alpha related to instrument utilized in this study.

In this study, the Cronbach's alpha is calculated to make sure the value is within the stated range: $0.8 > \alpha \geq 0.7$ (Allen & Yen, 2002).

Table 7. Reliability of the Instrument

Instrument	Number of items	Cronbach's Alpha (from available literature)	Cronbach's Alpha (from present study)
The Verbal Immediacy Scale	17	.84 to .90	.90
Teaching Presence Scale	16	.89 to .94	.93
Affective Learning Scale	6	.82 to .98	.90
Learning Loss Scale or Cognitive Scale	2	.85	.65
Motivation Scale	12	.90	.91
Online Questionnaire	53	.84	.85

Data Collection Procedures

The following criteria and steps were followed to collect data. First, the IRB approval was acquired to contact the participants. The participants were contacted online and were sent the consent letter. Appendix 4 presents the IRB approval letter and Appendix 5 presents the email and consent letter sent to the potential participants. The professors in the stated departments (refer to Table 6) were contacted for permission to send the email and consent letter through the class sites to increase response rate. IRB approved protocol was followed to conduct the data collection process. The survey questions link using Qualtrics (survey creating software) was emailed to the potential

participants. In the beginning the potential participants were asked whether they read and understood the consent form sent through email. By selecting 'I Affirm', they confirmed that they had read the statement of informed consent and that they had not previously completed this survey. Once they clicked on 'I Affirm', the survey questions appeared. Otherwise, they were not eligible for the survey and were led out of the survey page. The survey has a section in the beginning that instructs the scale and also states that participation is voluntary and the participants can close the survey anytime they want. The responses are kept confidential in this study. The responses are listed as a,b,c,d,e,f,g, etc. to avoid infringement of confidentiality contract as stated in the IRB application.

Dillman (2007) indicated that maximizing response rate and avoiding non-response rate are two main challenges associates with survey instruments. To increase the response rate and avoid non-response rate, the researcher sent three reminder emails to the participants requesting them to complete the survey. Four errors are identified that should be avoided in research surveys (Dillman, 2007): sampling error, non-response error, measurement error and coverage error. Sampling error and covering error are avoided by including whole population of the department. All the completed responses were included in the analysis of this study. Non-response errors are addressed by sending repeated reminders and contacting the instructors so that the information is disseminated through class announcements. The measurement issue error is avoided following suitable validity and reliability actions (refer to the reliability and validity section in this study).

Data Analysis

The collected data were analyzed using various statistical tools and software e.g. SPSS. An exploratory factor analysis was used to verify how many constructs were included on the survey instrument. Principle Component Analysis (PCA) method was used to perform the exploratory factor analysis. The purpose was to find out whether loading in each construct replicated that from the original design. Table 8 depicts the independent variables and dependent variables and their inter relations. SPSS 23.0 was used to analyze the data in this study. Descriptive statistics such as means, standard deviations, and frequencies were calculated to analyze data measured on interval scale. The researcher used linear regression analysis and multivariate regression analysis statistical procedures to answer the six hypotheses. Table 8 depicts the statistical procedures used to address each hypothesis.

Table 8. Statistical Procedures Used to Address Each Hypothesis

Hypotheses	Statistical Procedures	Rationale
Ho1	Linear Regression	Linear regression analysis technique is used to find out relation between teaching immediacy and teaching presence.
Ho2	Multiple Regression Analysis	Multiple Regression Analysis statistical technique was used to find out the influence of instructor

Table 8. Continued

Hypotheses	Statistical Procedures	Rationale
		immediacy and presence on learners' affective learning.
Ho3	Multiple Regression Analysis	Multiple Regression Analysis statistical technique was used to find out the influence of instructor immediacy and presence and learners' students' cognitive learning
Ho4	Multiple Regression Analysis	Multiple Regression Analysis statistical technique was used to find out the influence of instructor immediacy and presence and learners' motivation learning

Findings

The purpose of this study was to examine the role of instructor immediacy and presence in an online learning environment and to employ empirical and quantitative methods to determine how these two variables are related to three dependent variables: learners' affective learning, cognitive learning, and motivation. The study also sought to learn whether there is any evidence that the reported instructor immediacy and presence is influenced by the learners' demographics, or experiences (took one or more online classes).

Study Participants

Five hundred and seven responses were collected initially. The number is reduced to 300 after removing incomplete responses. Hence, the data collected for this study included 300 (n=300) uniquely completed surveys submitted online. Among 300 participants, 30% (n= 90) were males, 70% (n = 195) were females and 15 did not report their gender. The following information was retrieved out from the collected data: 19.5 % indicated that this was their first online course, 75.5% indicated that they had had previous online course experiences. 70% of the subjects lived close to the campus. Another 30 % were distance learning students.

Data were gathered using the instrument including surveys of demographic information (5 questions), teacher immediacy (17 questions), teacher presence (16 questions), learners' cognitive learning (2 questions), learners' affective learning (24 questions), and learners' motivation (12 questions).

The Verbal Immediacy Scale (Teaching Immediacy Scale) Combine the Two Tables Below

The Verbal Immediacy Scale (used by Groham 1988) consists of 17 items that focus on the behavior and availability of the instructor or facilitator. It is a 5-point Likert-type scale, with scores ranging from 1 (denoting strongly disagree) to 5 (denoting strongly agree). One of the items (Item 11) was reverse coded. The composite immediacy score was calculated by adding the scores of the 17 items (accounting for the reverse coded scores on Item 11). The resulting immediacy scores in this study ranged from 17 to 85, with a mean score of 58.15 across 300 responses. Higher scores indicated higher perceived instructor immediacy. Cronbach's alpha for the Verbal Immediacy Scale was found to be .90 in this study. This is an acceptable level of reliability. The value complies with previous studies that used this instrument (ranging from .86 to .94) (Baker, 2007; Christensen & Menzel, 1998; Moore et al., 1996).

Teaching Presence Scale

The Teaching Presence Scale (Shea et al., 2003) is comprised of 16 statements about the behavior of the instructor towards learners. It is a 5-point Likert-type scale with scores ranging from 1 (denoting strongly disagree) to 5 (denoting strongly agree). Scores from the 16 items were summed to calculate the composite teaching presence score. In this study, the resulting teaching presence scores ranged from 16 to 80, with a mean score of 64.84 across all of the responses. Higher scores indicate higher perceived teaching presence. Cronbach's alpha for the Teaching Presence Scale was found to be

.93. This is an acceptable level of reliability. The value complies with previous studies that used this instrument (Baker, 2007; Arbaugh, 2007; Shea et al., 2006).

Motivation Scale

The Motivation Scale (Christophel, 1990) consists of 12 bipolar items. Each item has adjectives at either end of the scale (i.e., 1=involved, 7 = uninvolved) with five numbered choices between the two opposites. Three of the items (4, 5, and 7) were reverse coded. The composite motivation score was calculated by summing the scores of the 12 items (accounting for the reverse coded scores on Items 4, 5, and 7). The resulting motivation scores in this study ranged from 20 to 74, with a mean score of 54.18. Higher scores indicated higher student motivation. Cronbach's alpha for the Student Motivation Measure was found to be .91 in this study. This is an acceptable level of reliability. The value complies with previous studies that used this instrument (alpha ranging from .90 to .96 (Baker, 2007; Richmond & Bennett, 2006; Rubin et al., 2004).

Six-Scale Measure (Affective Learning Scale)

The Six-Scale Measure of Affective Learning (McCroskey et al., 1985) includes six statements, each with four semantic differential pairs. There are seven selections along each continuum. A composite affective learning score was calculated by summing each semantic differential pair and then adding 24 items. The score ranged from 24 to 163 with a mean score of 136.05 for all of the submissions. Higher scores indicated higher affective learning. Cronbach's alpha for the Six-Scale Measure of Affective

Learning was found to be .91. The value complies with previous studies that used this instrument (alpha ranging from .82 to .98) (Baker, 2007)

The Learning Loss Scale (Cognitive Learning Scale)

The Learning Loss Scale (Richmond et al., 1987) consists of two questions designed to produce a measure of learning loss (i.e., the difference between what a student believes that she or he learned in the course and how much the same student could learn in the same course with the ideal instructor). The smaller the learning loss (from the possible range of 0 through 9), the closer the student is to the ideal learning experience and therefore the higher the perceived cognitive learning. The scores are reverse coded so that higher scores depict higher perceived cognitive learning. The resulting cognitive learning scores in this study ranged from 4 to 9, with a mean score of 7.18 across all responses. Higher scores indicated higher perceived cognitive learning. Cronbach's alpha for the Learning Loss Scale was found to be under .70 threshold value (Nunnally, 1978). "but lower thresholds are sometimes used in the literature" (Santos, 1999, p. 23). Nunnally also suggested that adding items to an instrument help improve reliability of that instrument. Since Cronbach's alpha improves with increasing number of items, low reliability does not surprise for an instrument with only two items. Baker (2007) proposed adding 4.8 items on the scale can improve reliability of the instrument using Spearman-Brown prophecy formula. Nevertheless, Charter (2001) refuted the applicability and significance Spearman-Brown prophecy formula in contemporary research.

Descriptive data about the survey constructs and questionnaire item-categories are summarized in Table 9 and are presented and discussed in the next section.

Table 9. Descriptive Data

	N	Minimum	Maximum	Mean	Std. Deviation
Immediacy	300	17	85	58.12	12.470
Presence	300	16	80	64.84	10.817
Motivation	300	20	74	54.18	13.470
Cognitive Scale	300	4	9	7.18	1.148
Affective	300	24	163	136.05	19.553

Hypotheses Testing

The relation among the variables, namely, teaching presence, teaching immediacy, learners' affective learning, motivation, and cognitive learning are depicted in the following section. Each Hypothesis is discussed along with the results obtained. The alpha level .05 is set throughout the study.

The initial response was 504. The number is reduced to 300 after removing incomplete responses. The missing values are deleted. The responses with missing values are deleted. Karpenter and Kenword (2014) proposed that it is advisable to start with large number of responses.

In a large data set, this could take the form of 'hot-deck' imputation. Simply speaking, this approach finds a subset of the data is found with similar observed values

to the unit with missing data, and the samples from this subset to impute the missing observations (p. 2). (Carpenter & Kenword, 2005)

The variables in this study are found out to be positively correlated.

Table 10. Initial Simple Pearson Correlation Coefficient Matrix

		Immediacy	Presence	Motivation	Affective	LS
Immediacy	Pearson Correlation	1				
Presence	Pearson Correlation	.75**	1			
Motivation	Pearson Correlation	.31**	.31**	1		
Affective	Pearson Correlation	.51**	.52**	.56**	1	
LS	Pearson Correlation	.85**	.85**	.50**	.38**	1

** . Correlation is significant at the 0.01 level (2-tailed).

Ho1: There is no statistically significant correlation between perceived instructor immediacy and perceived instructor presence in online classes.

Based on the data presented in Table 10, hypothesis 1 is rejected as bivariate Pearson correlation coefficient of instructor immediacy scores and instructor presence scores revealed a significant positive correlation between two variables ($r = .98$, $p < .01$). Table 11 presents the results of the correlational analysis. Figure 3 is the scatter plot that shows the relation between teaching immediacy and teaching presence. The linear relation is evident from the plot.

Table 11. Pearson Correlation

		Immediacy	Presence
Instructor Immediacy	Pearson Correlation	1	.98**
	Sig. (2-tailed)		.00
	N	300	300
Instructor Presence	Pearson Correlation	.98**	1
	Sig. (2-tailed)	.000	
	N	300	300

** . Correlation is significant at the 0.01 level (2-tailed).

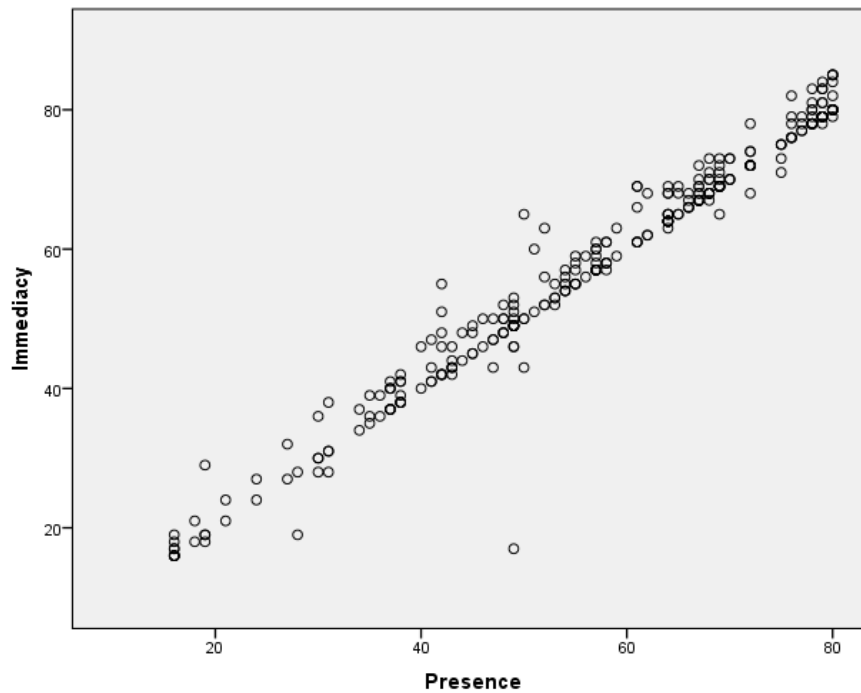


Figure 3. Scatterplot of the Relationship Between Teaching Immediacy and Teaching Presence

Ho2: There is no statistically significant variation between instructor immediacy and presence and students' affective learning in online classes.

The second hypothesis is rejected on the basis of data analysis. As mentioned in the method section, multivariate regression analysis statistical method was used to explore the relation. Pedhazur (1997, p. 33) coined, "Knowledge and understanding of the situations when violations of assumptions lead to serious biases, and when they are of little consequence, are essential to meaningful data analysis". Nevertheless, in social science and education vast majority of the literature does not address assumptions in regression analysis. Osborne, Christensen, and Gunter (2001) questioned the validity of the results presented in those studies and emphasized on the importance of looking at normality, linearity, multicollinearity, and homoscedasticity. The VIF value 1.1 (less than 3) and Condition Index value ranged from 1 to 17(refer to Table 12), the results dismisses the multicollinearity issue.

Table 12. VIF and Relation of Teaching Presence and Teaching Immediacy with Learners' Affective Learning

Coefficients^{a,b}			
Model		Collinearity Statistics	
		Toleranc e	VIF
1	Presence	9.000	1.100

a. Dependent Variable: Immediacy

b. Linear Regression through the Origin

	Model	B	Beta	Significance	Tolerance	t.
1	presence	1.7	.66	.000	.021	10.131
	immediacy	1.2	.35	..000	.021	9.361

a. Dependent Variable: Affective learning

The ANOVA table indicates that teaching presence and teaching immediacy influence students' affective learning $F(2,300) = 346.049$, $p < .001$. The sample multiple correlation coefficient was $R = .97$ and R^2 is .94, which implies that approximately 96% of the variance of students' affective learning scores can be clarified by the combination of instructor immediacy ($\beta = .12$) and presence ($\beta = .85$). Overall regression model shows significant relation.

Ho3: There is no statistically significant difference between instructor immediacy and teaching presence and students' cognition in online classes. Multivariate regression analysis was used to explore the relationship between instructor immediacy and presence

to students' cognition learning. The results indicate that instructor immediacy and teaching presence influence students' cognitive learning, $F(2, 300) = 307.72, p < .001$. The correlation coefficient was found $R = .97$ and $R^2 = .96$. This indicates that the linear combination of instructor immediacy ($\beta = .11$) and teaching presence ($\beta = .86$) explains 97% of the variance of students' cognition learning variability of the response data around its mean. Overall, regression model result shows significance relation, nevertheless, instructor immediacy did not show significance influence on students' cognitive learning ($p = .175$). Teaching presence was found to be significant predictor variable influencing students' cognitive learning ($p = .000$). Table 13 shows the regression model result.

Table 13. Relation of Teaching Presence and Teaching Immediacy with Learners' Cognitive Learning

Model		B	Beta	Significance	Tolerance	t.
1	presence	.095	.862	.000	.021	10.131
	immediacy	.014	.116	.175	.021	1.361

a. Dependent Variable: Cognitive Learning

b. Linear Regression through the Origin

c. Predictors: Immediacy, Presence

d. This total sum of squares is not corrected for the constant because the constant is zero for regression through the origin.

Ho4: There is no statistically significant difference between instructor immediacy and teaching presence and student motivation in e learning classes.

Hypothesis 4 was rejected on the basis of data analysis in this study. In this study, Hypothesis 4 was rejected based on the analysis of data. Multivariate regression analysis statistical technique was used to find out the relation of instructor presence and teaching immediacy on students' motivation in eLearning environment. The results indicate that instructor presence and teaching influence students' motivation, $F(2, 300) = 274.79$, $p < .000$. The correlation coefficient was found $R = .68$ and $R^2 = .46$. This indicates that the linear combination of instructor immediacy ($\beta = .07$) and teaching presence ($\beta = .62$) explains 46% of the variance of students' cognition learning variability of the response data around its mean. Overall, regression model result shows significance relation, nevertheless, instructor immediacy did not show significance influence on students' motivation ($p = .252$). Teaching presence was found to be significant predictor variable. Table 14 shows the regression model result.

Table 14. Relation of Teaching Presence and Teaching Immediacy with Learners' Motivation

Model		B	Beta	Significance	Tolerance	t.
1	presence	.740	.623	.000	.451	9.698
	immediacy	.097	.071	.252	.451	1.148

a. Dependent Variable: Motivation

b. Linear Regression through the Origin

c. Predictors: Immediacy, Presence

d. This total sum of squares is not corrected for the constant because the constant is zero for regression through the origin.

Discussion

This discussion section presents the analysis of the findings in the light of available literature. Each hypothesis is elaborated in the following section. One of the affordances of instructor presence is that it enhances teacher student relation and thereby, produces positive instructor immediacy (Hibbart, Garber, Kerr & Marquart, 2016). Baker (2012) found positive relation between teaching presence and teaching immediacy. Hypothesis one is rejected. The result is not surprising as available literature supports the finding. Garrison (2007) posited three factors associated with teaching presence, namely, facilitation, design and direct instruction. The facilitation component incorporating verbal and nonverbal cues support teaching immediacy construct. Scholars perceived teaching immediacy as reducing the psychological and physical distance between teacher and student (Mehlenbacher, 2010; Ghamdi et, al. 2016).

Ghamdi et al., posited teaching presence and teaching immediacy are important factors that influence pedagogical learning. The authors emphasized on feeling of isolation and negligence from the instructors as two important barriers that hinder implication of teaching immediacy in online class environment. Online participation and communication satisfaction are found to be influenced by teaching immediacy. Hence, the positive correlation found between instructor immediacy and teaching presence supports Transactional Distance Theory (promoting students and teachers/instructors connectedness to enhance learning).

Hypothesis two investigated the influence of teaching presence and teaching immediacy on learners' affective learning. Teaching immediacy and teaching presence

presented significant influence on learners' affective learning. The finding is supported in available literature. Hayes and Weibelzahl (2016) identified a positive relation between teaching immediacy and students' affective learning. Enhanced student teacher relation increases students' learning, attendance, attitude, interest, retention and overall engagement (Ellis, 2004; Hayes & Weibelzahl, 2016; McAlister, 2001; Whyte et al., 2003).

Positive relation between teaching presence and learners' affective learning is supported in available literature (Wise et al. 2004; Baker 2010). Positive impact of teaching presence on students' higher order learning perception is prevalent in available research (Kanuka, 2011; Morris, 2011; Shea, Li, & Pickett, 2006). In the context of a MOOCs study, recent research (Watson et al 2016; Richardson et al, 2015) found instructor's presence construct: facilitation, direction instruction and assessment influencing students' attitude towards learning.

Hypothesis three investigated the influence of teaching presence and teaching immediacy on learners' cognitive learning. Although, teaching immediacy did not show any significance influence on learners' cognitive learning, Teaching presence is found to positively influence learners' cognitive learning. The findings support available research. The findings also validated the significance of teaching presence on students' learning as indicated in the CoI model (Garrison, 2007; Zhoe & Sullivan, 2016) as specified in chapter IV. The finding nevertheless, repudiates Zhao and Sullivan's (2016) study, where the results show teaching presence adversely affects students' knowledge

creation. The results also support Baker's (2010) study in the similar context where the author did not find any effect of teaching immediacy on students' cognition.

The absence of significant relation between teaching immediacy and affective learning might reflect the difference in role and type of teaching immediacy constructs practiced by different instructors. The survey response that captures learners' perceived reactions may vary based on the participants' experiences and perception in online classes. McLemore and Cunningham (2016) shared an important note in the context of teaching immediacy. Humor used in sentences/lecture/feedback can often have potentially negative impact on the learners' mind, especially when they are shared in virtual environment in absence of verbal cues. This can adversely affect cognitive learning in online class environment.

Hypothesis four investigated the influence of teaching presence and teaching immediacy on learners' motivation. Teaching presence showed significance influence on learners' motivation. However, results did not present teaching immediacy as a significant predictor. Previous research support positive influence of teaching presence on learners' motivation in online class environment (Baker, 2010; Christophel, 1990; Ladyshevsky, 2013).

Baker (2010) mentioned a dearth of studies in online context that explored the relation of teaching immediacy and learners' motivation in online class environment. The finding in this study is aligned with one existing study that looked at influence of instructor immediacy on students' motivation (Baker, 2010). Further studies are required to corroborate the area of teaching immediacy affecting learners' motivation.

Learners' experiences in online classes are influenced by instructor's personality and presence (Ladyshevsky, 2013). Learners' engagement and learners' satisfaction can be achieved by following suitable strategies in online environment (Chakraborty & Nafukho, 2012; Ladyshevsky, 2013). The finding emphasizes on the fact that learners irrespective of demographic differences can be engaged in virtual environment by incorporating online engagement strategies. More research is needed to explore the effect of the demographic factors on learners' motivation, affective learning and cognitive learning.

Implications and Conclusion

Implication for Practice

This literature review contributes toward proposing strategies for online class environments, where the instructors and learners are capable of gaining positive learning experiences. Strategies can be beneficial in both educational and professional settings. Strategies are also helpful in designing and delivering effective online trainings in companies. "E-learning is considered an effective means to reduce training expenses and improve service quality of organizations" (Ho & Kuo, p. 24). The findings in this chapter are significant in contributing towards growing body of literature that contributes towards strategy formation in both corporate and educational settings.

The field of human resource development provides training and development as one of the core components to ensure development at both individual and organizational levels (Werner & DeSimone, 2011). The findings of this study act towards strengthening

the relationship between instructors and learners to ensure optimal learning experiences in virtual classrooms.

Implication for Theory

Existing research on the role of teaching presence and teaching immediacy in online learners' motivation and learning was explored in this study. To achieve the purpose of this study, relevant articles were extracted and reviewed using the Literature Review Matrix developed by Garrard (2007). Anderson et al. (2001) argued that teaching presence can be achieved through designated "student" facilitators (i.e. it can be evenly distributed among students, who can play a facilitator's role in leading specific discussions or assignments). Anderson (2008) further argued that online discussions and discourse provides learners with the opportunity to engage in critical reflection and set up a platform where students can freely express their views--even when they disagree with the instructors. Prensky (2000) preferred to call the process as power of reasoning. As Anderson (2008) correctly noted when talking about involving students in discourse:

In fulfilling this component of teaching presence, the teacher regularly reads and responds to student contributions and concerns, and constantly searches for ways to support understanding in the individual student, and the development of the learning community as a whole. (p. 351)

Limitations

This paper has limitations. Each limitation, however, opens opportunities for future research areas. The paper looked at the previous studies and proposed connections

between teaching presence and students' learning, and teaching immediacy and learners' motivation and cognition. Quantitative and qualitative studies are needed to confirm the findings in this paper. Important demographic variables such as age, gender, ethnic background and socioeconomic status were not explored in this study, therefore providing an opportunity to expand the research in this area.

CHAPTER VI

SUMMARY AND CONCLUSIONS

The purpose of this dissertation was to present strategies and techniques to enhance student engagement in online class environment. The four articles included in this dissertation highlight the aspect of student engagement to ensure positive learning experience. Introduction section establishes the foundation, adds milieu and provides context for virtual class engagement strategies. The previous section affirms that suitable schemes can help boost learners' motivation and perceived learning.

Manuscript one proposes a number of easy to follow strategies that can increase students' participation with increased use of communication channels. The manuscript also proposes optimum use of three types of interactions available in online classes. It successfully identified relevant studies that found various practical ways to implement student engagement strategies. The paper actually provides an overview of recent research (empirical studies) that detected the significance of achieving student engagement following step by step processes. The second and third manuscripts are extensions of the first manuscript. The second paper identified teaching presence and teaching immediacy as important construct that influence student engagement in online class environment. The constructs helped comprehend instructor's roles in online environment. The third manuscript is an attempt to understand and explore the role of relevant theory in virtual learning world. Solid foundation of germane theories justifies strategic actions. In this attempt three constructs that represent student motivation and learning are identified. The constructs are learners' motivation, learners' affective

learning and learners' cognitive learning. The forth manuscript is an empirical study that focuses on the influence of teaching presence and teaching immediacy on learners' motivation, learners' affective learning and learners' cognitive learning in online class environment.

Online learning is gaining popularity. Glazier (2016) identified the trend of incorporation of online classes in higher education sector. Around 7.1 million learners are taking online classes in US (Allen & Seaman). Learning is defined as persistence change in performance based on experience and interactions. Hence, learners experience and interactions are significant component of students' online learning. The manuscripts included in the dissertation emphasized on incorporating learners' perception and interactions as integral part of online engagement strategy. Three types of interactions are prevalent on the discussions: learner vs. learner interaction, learner vs. content interaction and learner vs. instructor interactions. Proposed strategies and future steps proposed in this dissertation revolved around the stated types of interactions in virtual environment. Scopes of interactions are explained with the help of practicing social learning theory within e learning community. Chapter four also advocated the necessity of considering critical thinking among distance learning students. Critical thinking opportunity often leads to transformative learning (Yuzer & Kurubacak, 2010)

One of the advantages of distance learning education includes disseminating knowledge without geographic barriers. The limitless expansion gives opportunity of knowledge sharing throughout the world. The dissertation attempts to add to the knowledge base of online learning. The growth of internet savvy learners play role in the

increasing popularity of online classes in both educational and professional settings. Available literature pointed out a trend that indicates students with higher GPA are found out to be involved and engaged on online environment (Glazier, 2016). This indicates that online learning requires significant amount of self-directed learning. Hence, it is important to motivate students in virtual classes. The chapters included in this dissertation include discussion regarding ways to increase student motivation in e learning classes. It is important to form learning community or a 'knowledge building community', where students take the role of active learners and learn from each other's values, opinions, experiences and knowledge (Chapter IV). The social network prepares students to succeed not only in their respective online classes but also helps them understand the importance of forming social network to create and share knowledge at any podium.

The online class experience is often associated with challenges like learner isolation, lack of interaction, absence of student motivation etc. (Chakraborty & Nafukho, 2012). As a researcher and practitioner in this field, it is important to pay attention to the adversity and attempt to reduce or stop the effect of problem causing factors. Students, who come with the notion that online class is synonymous to easy work, find it difficult to manage the workload and engage in activities available online (Clark-Ibáñez and Scott 2008). Therefore, it is important to understand students' readiness and learning style in online classes (Chapter II)

The dissertation mentioned in various places (Chapters II, III & IV) that inclusion of technology is crucial to enhance the positive effect of teaching immediacy

and teaching presence in virtual environment. It is time to change the notion of seeing online classes as just a platform to deliver content. Virtual class environment is capable of creating interactions that triggers critical thinking, useful collaboration and insightful reflection. Nevertheless, this requires conscious strategy formation to achieve success. Chapter III helps get a glimpse of usefulness of solid theories to propel purpose and process online interfaces towards the right direction.

While understanding of solid theories is necessary to explore various interactions in online classes, rigid adherence to theoretical concepts might hinder the opportunity of considering different interfaces to engage learners in online classes. Solid theoretical foundation and creativity together should guide us to explore new options of student engagement in online classes. The strategic action and application then becomes beneficial and justified.

The following section lists some key findings highlighted in this dissertation.

1. It is important to explore and follow strategies to motivate and engage students in online class environment. The strategies are a. Creating and maintaining positive learning environment, b. Building learning community, c. Giving consistent feedback in timely manner, d. Using right technology to deliver the right content, e. Providing proper support system.
2. Teaching and learning activities are utilized in order to engage students in online learning environments. Some of the activities are, a. Encouraging peer feedback, b. Incorporating group work, c. Offer collaborative activity in the beginning of the class to promote interactions, d. promote assignments that

require interactions with professionals in the field, e. Introduce activities like, debate to encourage critical thinking.

3. The role of constructivist learning theory is significant in online class environment. The learner centered approach of constructivist learning theory is often related to self-directed learning, where learners take charge of their learning process (Nafukho, 2007). Constructivist learning theory proposes that learning is an active process and learners create their own knowledge.
4. Teaching presence or instructor presence and teaching immediacy or instructor immediacy play significant roles in online class engagement. Instructors act as facilitator, subject matter expert, course designer, mentor, counselor, explorer, researcher, administrator, technical assistant, repository etc.
5. There is statistically significant correlation between perceived instructor immediacy and perceived instructor presence in online classes.
6. Teaching presence influences learners' motivation, affective learning and cognitive learning.

Recommendations for the Future Studies

The present dissertation actually serves as a stepping stone for future studies. The following section highlights some recommendations that add to the body of knowledge in the field of online student engagement.

1. The empirical study used convenient sampling method and included graduate students within one department. It will be interesting to see the

results including large sample. MOOCs can be used to explore the interactions of constructs.

2. The empirical study did not look at any influence of learners' demography and previous online class experiences linked to learners' motivation, cognitive learning, and affective learning. More studies in different contexts are needed to explore the relation.
3. The papers included in this dissertation did not consider students' financial situation or institution's characteristics. Chen et. al., (2010) proposed that certain student categories can influence willingness of opting for online classes. Future studies should include university characteristics and how they influence student engagement.
4. Instructor's perspectives, viewpoints, experiences and expertise can reveal useful strategies for online student engagement (Means et, al., 2010). The papers included in this dissertation focused on learners' actions and reactions. Future studies are recommended that consider both instructor's and students' responses as study constructs.

The dissertation explored student engagement strategies in online class environment. In the process the dissertation identified some important constructs that contribute towards influencing learners' motivation, attitude towards their learning, and perceived learning positively. The dissertation has contributed to the growing body of literature in online learning facet. Experimental research towards improving learners' learning outcomes in virtual environment is gaining popularity and should be

encouraged to help achieve online learner engagement. As discussed earlier, the study finding is useful for researcher and practitioners in the field of human resource development. Human resource development advocates for unleashing human potential to its fullest to through three important domains: career development, organization development, and training and development Swanson & Holton, 2012). The dissertation findings contribute towards the three domains.

Hence, it can be concluded that the dissertation successfully achieved its purpose of presenting a holistic exploration of student engagement strategies in the context of learning environment. As researcher and as future scholar, I focused on the challenges and drawbacks of online learning environment. The search was focused on finding solution, means, ways and strategies to engage online learners.

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APPENDIX 1

Online Class Questionnaire

The purpose of this research study is to examine strategies to improve learners' engagement in online class environment. You may refuse to participate in this study. If you agree to participate, you are free to withdraw at any time.

To participate in the study, you are asked to complete and submit an anonymous online survey. Please record one response per question by indicating your opinion based on your experiences. Completion of the survey will take approximately 10-15 minutes. There are no known risks for participating in the study, and all submissions will be kept anonymous by the researcher. Thank you for your participation. Your contribution to this research is valued and could potentially provide online instructors with a better understanding of best practices and teaching strategies in online learning environments that can benefit their students.

By selecting 'I Affirm' below, you affirm that you have read the statement of informed consent and that you have not previously completed this survey.

☐ I Affirm

Consider the behavior of your instructor in your online course when responding to the following statements. Please note that some survey items refer to traditional class settings (i.e. they mention doing things "in class" or "after class") but you should answer them within the context of your online course.

Commitment

Instructions: Listed below is a series of statements that represent feelings that you might have about the online class that you are taking. Please indicate the degree of your agreement or disagreement with each statement by selecting a number from 1 to 7 using the scales shown below.

	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Slightly disagree</i>	<i>Undecided</i>	<i>Slightly agree</i>	<i>Agree</i>	<i>Strongly agree</i>
The instructor uses personal examples or talks about experiences she/he had outside of class.	1	2	3	4	5	6	7
The instructor asks questions or encourages students to respond	1	2	3	4	5	6	7
The instructor gets into discussions based on something a student brings up even when this doesn't seem to be part of his/her plan	1	2	3	4	5	6	7
I do not feel “emotionally attached” to this center. (R)*	1	2	3	4	5	6	7
The instructor uses humor in the course	1	2	3	4	5	6	7
This organization has a great deal of personal meaning for me.	1	2	3	4	5	6	7
The instructor addresses students by name.	1	2	3	4	5	6	7

	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Slightly disagree</i>	<i>Undecided</i>	<i>Slightly agree</i>	<i>Agree</i>	<i>Strongly agree</i>
The instructor gets into conversations with individual students before or after class	1	2	3	4	5	6	7
The instructor has initiated conversations with me before, after or outside of class	1	2	3	4	5	6	7
The instructor refers to class as "our" class or what "we" are doing	1	2	3	4	5	6	7
The instructor provides feedback on my individual work through comments on s, discussions etc.	1	2	3	4	5	6	7
	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Slightly disagree</i>	<i>Undecided</i>	<i>Slightly agree</i>	<i>Agree</i>	<i>Strongly agree</i>
The instructor calls on students to answer questions even if they have not indicated that they want to talk	1	2	3	4	5	6	7
The instructor asks how students feel about an assignment, due dates, or discussion topics would be scarcity of available alternatives.	1	2	3	4	5	6	7
The instructor invites students to telephone or chat sessions outside of class if they have questions or want to discuss something	1	2	3	4	5	6	7
The instructor asks questions that solicit	1	2	3	4	5	6	7

viewpoints or opinions							
	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Slightly disagree</i>	<i>Undecided</i>	<i>Slightly agree</i>	<i>Agree</i>	<i>Strongly agree</i>
The instructor praises students' work, actions or comments	1	2	3	4	5	6	7
The instructor will have discussions about things unrelated to class with individual students or with the class as a whole	1	2	3	4	5	6	7
The instructor is addressed by his/her first name by the students	1	2	3	4	5	6	7
Please answer the following questions about your instructor.	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Slightly disagree</i>	<i>Undecided</i>	<i>Slightly agree</i>	<i>Agree</i>	<i>Strongly agree</i>
Overall, the instructor clearly communicated important course goals (for ex., provided documentation on course goals)	1	2	3	4	5	6	7
Overall, the instructor clearly communicated important course topics (for ex., provided a clear and accurate course overview)	1	2	3	4	5	6	7
Overall, the instructor provided clear instructions on how to participate in course learning activities (for	1	2	3	4	5	6	7

ex., provided clear instructions on how to complete course assignments successfully)							
Overall, the instructor clearly communicated important due dates/time frames for learning activities that helped me keep pace with this course (for ex., provided a clear and accurate course schedule, due dates etc.)	1	2	3	4	5	6	7
Overall, the instructor helped me take advantage of the online environment to assist my learning (for ex., provided clear instructions on how to participate in online discussion forums)	1	2	3	4	5	6	7
	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Slightly disagree</i>	<i>Undecided</i>	<i>Slightly agree</i>	<i>Agree</i>	<i>Strongly agree</i>
Overall, the instructor for this course was helpful in identifying areas of agreement and disagreement on course topics that assisted me to learn	1	2	3	4	5	6	7
Overall, the instructor was helpful in guiding the class towards understanding course topics in a way that assisted me to learn	1	2	3	4	5	6	7

Overall, the instructor acknowledged student participation in the course (for example, replied in a positive, encouraging manner to student submissions)	1	2	3	4	5	6	7
Overall, the instructor encouraged students to explore new concepts in this course (for example, encouraged the exploration of new ideas)	1	2	3	4	5	6	7
Overall, the instructor helped to keep students engaged and participating in productive dialog	1	2	3	4	5	6	7
Overall, the instructor helped keep the participants on task in a way that assisted me to learn	1	2	3	4	5	6	7
	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Slightly disagree</i>	<i>Undecided</i>	<i>Slightly agree</i>	<i>Agree</i>	<i>Strongly agree</i>
Overall, the instructor presented content or questions that helped me to learn	1	2	3	4	5	6	7
Overall, the instructor helped me to focus discussion on relevant issues in a way that assisted me to learn	1	2	3	4	5	6	7
Overall, the instructor provided explanatory feedback that assisted me to learn (for	1	2	3	4	5	6	7

example, responded helpfully to discussion comments or course assignments)							
Overall, the instructor helped me to revise my thinking (for example, correct misunderstandings) in a way that helped me to learn	1	2	3	4	5	6	7
Overall, the instructor provided useful information from a variety of sources that assisted me to learn (for example, references to articles, textbooks, personal experiences or links to relevant external websites)	1	2	3	4	5	6	7

On a scale of 0-9, how much have you learned in the online class you are in now, with 0 meaning you learned nothing, and 9 meaning you learned more than in any other class you've ever had.

1 2 3 4 5 6 7 8 9
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

On a scale of 0-9, how much do you think you could have learned in this class had you had the ideal instructor, with 0 meaning you could have learned nothing, and 9 meaning you could have learned more than in any other class you've ever had?

1 2 3 4 5 6 7 8 9
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Please indicate the number which best describes your feelings, in general, about this online course.

	1	2	3	4	5	6	7	
Motivated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Unmotivated
Interested	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Not interested

Involved	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Not involved
Not Stimulated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Stimulated
Don't Want to Study	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Want to study
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Not inspired
Unchallenged	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Challenged
Uninvigorated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Invigorated
Unenthused	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Enthused
Excited	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Not Excited
Aroused	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Not Aroused
Not Fascinated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Fascinated

My attitude about the content of this course:

	1	2	3	4	5	6	7	
Good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Bad
Worthless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Valuable
Fair	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Unfair
Positive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Negative

My attitude about the behaviors recommended in this course:

	1	2	3	4	5	6	7	
Good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Bad
Worthless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Valuable
Fair	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Unfair
Positive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Negative

My attitude about the instructor of this course:

	1	2	3	4	5	6	7	
Good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Bad
Worthless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Valuable
Fair	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Unfair
Positive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Negative

My likelihood of attempting to engage in the behaviors recommended in this course:

	1	2	3	4	5	6	7	
Likely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Unlikely
Impossible	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Possible
Probable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Improbable
Would	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Would Not

My likelihood of enrolling in another course of related content, if I had the choice and my

schedule permits: (If you are graduating, assume you would still be here)

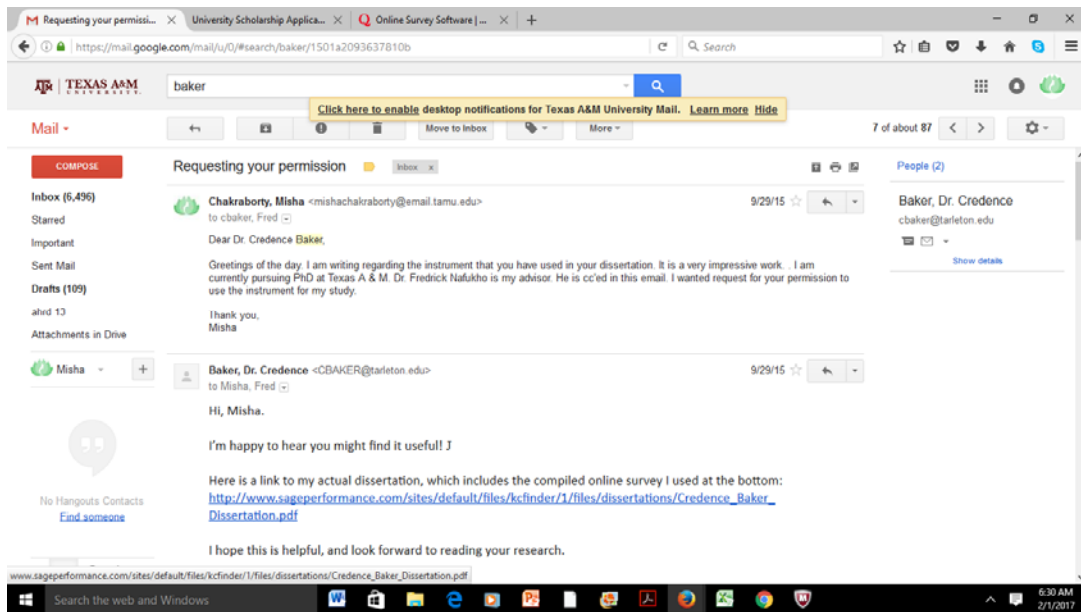
	1	2	3	4	5	6	7	
Likely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Unlikely
Impossible	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Possible
Probable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Improbable
Would	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Would Not

My likelihood of taking another course with the instructor in this course, if I have a choice, is: (If you are graduating, assume you would still be here)

	1	2	3	4	5	6	7	
Likely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Unlikely
Impossible	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Possible
Probable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Improbable
Would	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Would Not

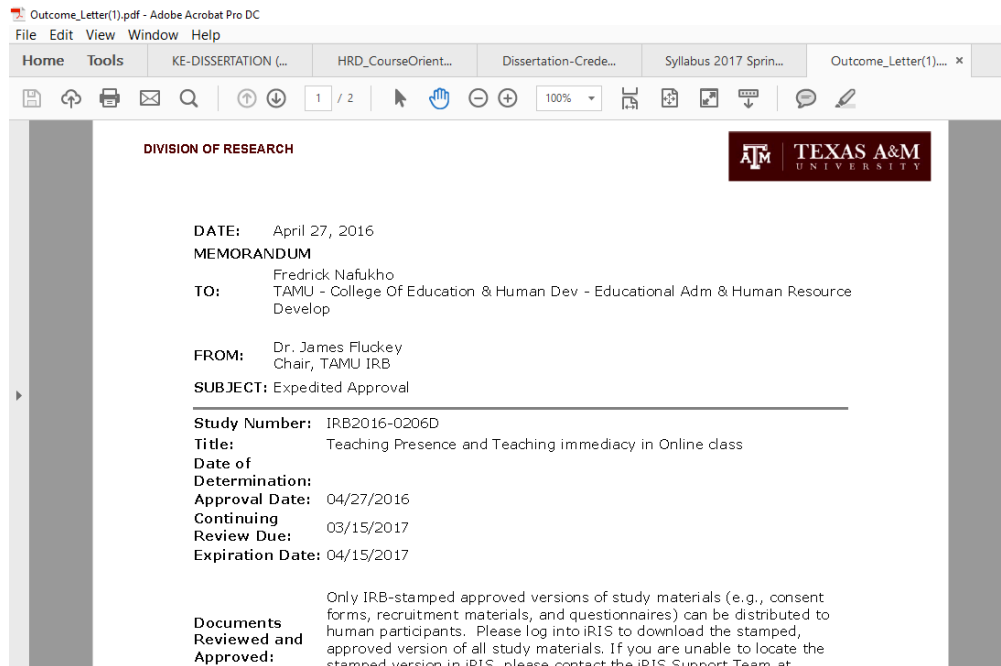
APPENDIX 2

Letter of Permission



APPENDIX 3

IRB Approval



APPENDIX 4

Literature Review Matrix

No .	Lead Author	Year	Purpose	Participants	Methodology	Findings
1	Arbaugh	2014	The purpose of this study is to examine whether course technologies, learner behaviors or instructor behaviors (teaching presence) best predict online course outcomes so that administrators and support personnel can prioritize their efforts and investments.	634 students and 18 instructors	Quantitative: survey questionnaire	Teaching presence and perceived learning shows strongest relationship
2	Boston	2014	Explores “the relationship between indicators of the Community of Inquiry Framework and student persistence”.	28877 students at American Public University System (APUS)	Quantitative: Linear regression was utilized to analyze the relationship between a linear combination of the independent variables	Social presence and teaching presence are important predictors for students re enrollment (retention)
3	Campbell	2014	“The goal was to identify the effects of a set of specific teacher activities on	132 students enrolled in an online critical thinking class	Quantitative	High presence was not associated with activity in class

No .	Lead Author	Year	Purpose	Participants	Methodology	Findings
			objectively determined learning outcomes” (p. 41)			discussion, homework performance, or tests over the assigned readings
4	Ekwunife-Orakwue	2014	The purpose of this study is to measure how student interactions in online and blended learning environments impacted student learning outcomes, as measured by student satisfaction and student grades.	342 students enrolled in online classes in	Quantitative: student satisfaction survey instrument	“Students may interact with course contents more frequently than they interact with their instructors and other learners. This raises the question of the role instructors should play in promoting greater dialogue with students, and among students, especially to reduce feelings of isolation and detachment that may contribute to perceived distance”.
5	Caudle	2013	The study describes how the author “established teaching	Qualitative: Narrative Approach	Teachers (4) mentoring preservice teachers enrolled in the	“This study provides insight into the many roles a facilitator

No .	Lead Author	Year	Purpose	Participants	Methodology	Findings
			and social presences within a 3-month community of practice comprising four educators and mentor teachers”.		university's early childhood teacher education program	adopted to establish teaching and social presences within a community of practice”.
6	Gregory	2012	“The purpose of this article is to show some evidence of the mutual influence of the students’ technological behaviors and the students’ cognitive factors in online learning environments – including teacher and instructional design factors”.	4 participants for qualitative observation; quantitative data was analyzed using 88 participants, 2130 electronic communications and 268 learning products.	mixed method approach: Observation and statistical analysis	“A teacher who is planning online individual work should bear in mind that, in this type of activity, students show a tendency to approach the teacher personally to ask for explanations, express doubts or make comments in relation to the course content”. “a teacher planning online collaborative group work needs to consider the composition

No.	Lead Author	Year	Purpose	Participants	Methodology	Findings
						<p>of the group as it is likely that the students will only interact with members of their own group and not with the rest of the class and they will interact, to a lesser extent, with the teacher”</p> <p>Hence, learner and teacher interaction depends on planned students’ assignments.</p>
	Shea	2006	“The goals of this research were to enhance understanding of online pedagogical processes in the service of improving the quality of instruction and learning in a large asynchronous learning environment—thus in	1067 participants from 32 colleges	Quantitative survey method	“There is a clear connection between perceived teaching presence and students’ sense of learning community”.

No .	Lead Author	Year	Purpose	Participants	Methodology	Findings
			many ways this mode of inquiry may be seen as action research”.			
7	Kupczynski	2010	The purpose of the study is to “to explore student perceptions of the impact of the indicators of Teaching Presence on their success in online courses”.	643 students (362 students enrolled in a variety of classes related to certificate or AA programs at South Texas College; The second group of students consisted of 281 students enrolled in courses at West Virginia University's College of Human Resources and Education).	Mixed Method that is Descriptive statistics, odds ratios and open ended questions	“feedback indicator as being most important to course success; regardless of learner level, the need for presentation of clear, concise objectives, instructions and general participation guidelines should be a cornerstone of online course development”

APPENDIX 5

Consent Letter Send to the Participants

Project Title: Engaging Online Learners

You are invited to take part in a research study being conducted by Misha Chakraborty, a researcher from Texas A&M University and a doctoral student at Educational Human Resource Development department. The information in this form is provided to help you decide whether or not to take part. If you decide to take part in the study, you will be asked to sign this consent form. If you decide you do not want to participate, there will be no penalty to you, and you will not lose any benefits you normally would have.

Why Is This Study Being Done?

The purpose of this study is to explore online class engagement strategies from students' perspectives. Some studies are already done using quantitative techniques involving a lot of participants. This study is using qualitative technique to capture detailed experiences of each participant in this study.

Why Am I Being Asked To Be In This Study?

You are being asked to be in this study because you are a graduate student at Texas A&M University and have taken or are taking online classes.

How Many People Will Be Asked To Be In This Study?

600 students will be invited to participate in this study locally.

What Are the Alternatives to being in this study?

The alternative to being in the study is not to participate.

What Will I Be Asked To Do In This Study?

You will receive an email explaining how you can access the survey, You will be asked to participate in a survey and complete a questionnaire. It will take 10 to 15 minutes to complete the survey.

Will Photos, Video or Audio Recordings Be Made of Me during the Study?

No

Are There Any Risks To Me?

The things that you will be doing are of no more risks than you would come across in everyday life. Your participation in this study will be confidential and your privacy will uphold to the highest degree possible.

Although the researchers have tried to avoid risks, you may feel some questions that are asked of you and the class will be emotional and require self-reflection. You do not have answer anything you do not want to. Information about individuals and/or organization on campus that may be able to help you with any additional issues will be given to you if needed.

Are There Any Benefits To Me?

You will have the opportunity to share your experiences regarding being student in an online class environment. Numbers of online classes are increasing both in educational and professional worlds. You experience, suggestions and problems can help college, universities and organizations understand and adopt strategies to make online classes more engaging and interesting. Also, you will get an opportunity to participate in a lucky draw to win a gift.

Will There Be Any Costs To Me?

Aside from your time, there are no costs for taking part in the study.

Will I Be Paid To Be In This Study?

You will not be paid for being in this study. However, you get a chance to participate in a lucky draw.

Will Information From This Study Be Kept Private?

(if applicable) The records of this study will be kept private and your identity will be kept confidential. No identifiers linking you to this study will be included in any sort of report that might be published. Research records will be stored securely and only principle and co-investigator will have access to the records. Information about you such as consent form and any interview data will be stored in a locked file box as well as on a flash drive, which is password protected.

Representatives of entities such as Texas A& M University Human Subject Protection Program may access your records to make sure that the study is being run correctly and that information is collected properly. Information about you and related to this study will be kept confidential to the extent permitted or required by law.

Who may I Contact for More Information?

You may contact the Protocol Director, Misha Chakraborty (Doctoral student in the department of Educational Human Resource Development) at 650 353 6574 or mishachakraborty@neo.tamu.edu to discuss any concern or complaints about the research. You at may also contact the Faculty Advisor Dr. Fredrick Nafukho at 979.845.2716 fnafukho@tamu.edu.

For questions about your rights as a research participant; or if you have questions,

complaints, or concerns about the research, you may call the Texas A&M University Human Subjects Protection Program office at (979) 458-4067 or irb@tamu.edu.

What if I Change My Mind About Participating?

This research is voluntary and you have the choice whether or not to be in this research study. You may decide to not begin or to stop participating at any time. If you choose not to be in this study or stop being in the study, there will be no effect on your student status, medical care, employment, evaluation, relationship with Texas A&M University, etc. Any new information discovered about the research will be provided to you. This information could affect your willingness to continue your participation.

By participating in completing the survey, you are giving permission for the investigator to use your information for research purposes.

Thank you.

Dr. Fredrick M. Nafukho
Misha Chakraborty